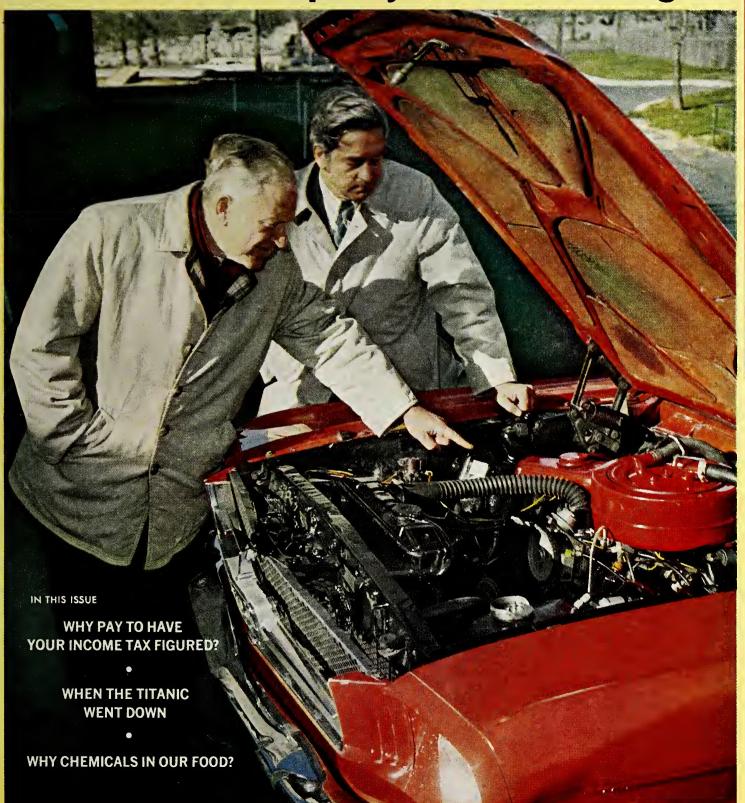
THE AMERICAN

20c · MARCH 1972

LEGION

MAGAZINE

ON THE WAY: A Completely Different Auto Engine





The American

LEGION

Magazine

Contents for March 1972

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PHOTO BY JOHN PITKIN

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FOOTHOLD FOR CONQUERED DISEASES

SIR: "A New Foothold for 'Conquered' Diseases?" (January), by Harvey Ardman, is very well done and strongly emphasized that immunizations should be given in infancy rather than waiting until school age, which is too late for most of the children who contract these dread diseases. It is a sorry commentary on our sense of values that in a number of states last year 95%-plus of the horses could be vaccinated against Venezuelan equine encephalomyelitis (VEE) in a two-week period but we still can't get but 50% of our human infants immu-

The news item entitled "VD Running Wild" is also of extremely timely interest. I am aware that The American Legion has a number of resolutions in its archives about VD, but these only will gather dust unless the various individual Posts and Legionnaires implement these calls for action.

The American Academy of Family Physicians is an organization of over 31,000 family doctors. It is directly and intimately involved with both of these matters inasmuch as our members are physicians of first contact and are heavily involved in immunization and venereal disease control programs or activities. Thank you again for bringing these matters to the attention of your many readers.

SAM A. NIXON, M.D. The American Academy of Family Physicians Kansas City, Mo.

OUR NATIONAL PARKS' CENTENARY

SIR: Let me say how much I appreciated "100 Years of Our National Parks," which appeared in the January issue, and I want to thank everyone who had anything to do with its text and photographs. It is a great article.

A. A. WEIGEL Woodville, Ohio

SIR: I read with great interest your article on our national parks. Especially, I was interested in the credit given to photography in general and to Mr. William H. Jackson in particular for their part in bringing back to the Congress and the public, records of this beautiful land.

Around 1938, I was privileged to meet Mr. Jackson, who was then in his nineties. He was a guest speaker on a radio question and answer show, which was so popular in those days. To see that man, in his mid-nineties, unrehearsed, answer questions from the audience was a remarkable sight.

After the show, I took this photo of Mr. Jackson, the man who did so much to make Yellowstone a national park.

> O. L. VARELA Kensington, Md.



William H. Jackson (1843-1942)

AMERICA'S COMICS

SIR: "75 Years of American Newspaper Comics" (December) brought poignant memories of long ago. It was a most delightful article, but I note that the author failed to mention that "Bringing Up Father" made its debut under the caption "Archy and Rosy." Also, it completely omitted any reference to that most likeable and carefree scamp, Slim

This comic strip was built around two characters, Slim and Cap. Cap was the village cop, obese, helmeted and with a Ben Turpin mustache. Slim defied description. He was a loose-jointed meshwork of long beanpole pumping legs and flailing arms, pie-faced, with a frozen bucktoothed quarter-moon smile. It was a merry chase that Slim led Cap. Even at this remote distance I can see Slim, pig under arm, sprinting through the fields with Cap in slow pursuit. Usually, the strip faded out with Cap standing frustrated, looking at Slim's pretzel-like fleeing figure silhouetted against a bright full moon, far in the distance. Thanks for giving me that youthful feeling of long, long ago.

BILL WALLICK Washington, D.C.

PERSONAL =

DOLLAR DEVALUATION DATA. 1971 FEDERAL TAX FACTS. **NEWS ITEM TO NOTE.**

Now that you have lived with devalued dollars for a couple of months, what changes have you noted in your economic life?

Your likely answer is "none." Nor are you apt to feel any real jolts over

the longer haul. Here's why:

· Although "devaluation" is a nasty word in many have-not nations, it won't bother the average citizen here. The reason is simple: Most things we consume are U.S.-produced. So it's pretty immaterial to you and me how the Russians, say, evaluate our dollar when we're doing business with ourselves and not buying much of anything from the USSR. Were the reverse true, of course, our cost of living would skyrocket overnight.

· In all, the simple rule of thumb is 1) if you buy domestic goods, the game stays unchanged, but 2) if you buy imported goods, prices will edge up some. Major nations whose currencies now are dearer in terms of dollars are West Germany (up almost 14%), Japan (up nearly 17%), Italy (around 7%), Belgium (11%), and Britain and France (between 8% and 9%). So if you're in the market for foreign-made cameras or TV sets, expect to pay more. Ditto if you buy U.S.-assembled goods with a lot of foreign components. Ditto if you travel to any of these nations. (A countervailing factor, however, is the willingness of foreign sellers to absorb some of the higher prices.)

· As a broader consideration: Will devaluation make the United States more competitive in foreign markets and thus increase jobs here? Technically, it should. But it will take time. What's more imminent is that our balance-of-trade with other nations will improve in our favor.

In thinking about your Federal income tax return, ask yourself these questions (they cover points sometimes overlooked):

AM I ENTITLED TO SICK PAY EXCLUSION? If you were absent from work because of sickness or injury-even though not incurred in connection with your job-you may be able to deduct some of the pay you received while you were away. Importantly, you can take this deduction no matter how you file-via the standard-deduction method or the itemized-deduction method.

Also, your exclusion will apply even if you receive damages for injury or illness; benefits from a policy on which you have paid all premiums; compensation for permanent bodily losses; Workman's Compensation.

Inasmuch as the rules governing sick pay exclusion—while not complicated—are geared to a variety of situations, they can't be explained here without the danger of misleading you. Look them up for yourself.

AM I ENTITLED TO DEDUCTIONS FOR CASUALTY LOSSES? A casualty loss means destruction of property via an event of a sudden, unexpected or unusual nature—hurricane, flood, fire, theft, etc.

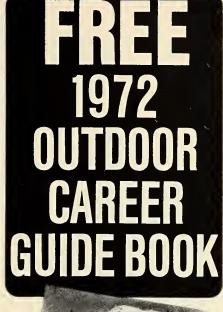
The first \$100 of such losses are not deductible; the rest are—minus whatever insurance you collected. Also, losses can be taken only if you file by the itemized-deduction method.

IS MY EMPLOYER WITHHOLDING TOO MUCH OR TOO LITTLE? Last year, withholding was too skimpy in many cases. This year, it could be too high for certain groups. Check your situation out and correct it if you feel enough money is involved.

Note of the month:

CHOLERA: Health authorities all over the world nervously are trying to stop this dread disease from spreading. So far it has worked its way from the Far East through the Middle East and is appearing in Africa and even (in isolated cases) in Europe. The object now is to keep it from being imported into Latin America. Cholera stems from poor sanitation, can kill a victim quickly by cramps and dehydration, though you can get shots to protect yourself. They're a good idea, say travel authorities, when you take a trip to suspect areas.

By Edgar A. Grunwald





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By LEAVITT A. KNIGHT, JR.

T's INCOME TAX time again—time to file your 1971 federal and state returns and pay what you still owe or claim a refund—if you can figure it out.

There are some new wrinkles regarding the 1971 tax, but the question most peculiar to this year isn't a matter of law or regulation. By all odds what's really new is the new emphasis that events of the last year have placed on the old question as to whether you should figure out your tax yourself, or pay someone to help you.

Those who could afford it and felt they needed it have, of course, long hired private accountants to help them file complicated returns. But for years, now, local and national firms have been burgeoning which—for a nominal fee—would help the average taxpayer (he with no accountant) file his return. They do a sort of production line job, and in no sense serve as your private accountant. The H&R Block company is undoubtedly the biggest of the operators in this field across the nation, though there

Last year, such firms leaped into more prominence than their advertising was

are many others.



In Atlanta, five tax-aid firms . . .

getting them when several newsmen pulled a little trick on them.

Last March and April, reporters in several cities took the same tax information to several of these firms and came away with all sorts of different taxes to pay, or refunds to be obtained, based on the *same* data.

One national newspaper took the same tax information for the same individual to five firms in Atlanta (including H&R Block and Sears) and got precious little agreement from them on (1) itemized deductibles, (2) deductible moving expenses, (3) total federal tax owed and (4) total state tax owed.

Among the five, the only agreement among them was that three of the firms said that the taxpayer could not deduct

Why Pay to Have Your Income Tax Figured?

The final answer is up to you, but here's a look at both sides of the question to help you decide.

his moving expenses on his Georgia state tax form. But one said he could deduct \$3,585 and another said he could take off \$204. Among all five firms there was no agreement on total deductions or moving deductions that could be taken off on the federal return—or on the total state and federal tax owed.

Other reporters did the same sort of thing, with the same sort of results, at various tax counseling offices in Philadelphia, New York and other cities. Some differences were substantial, as they ranged from filing for a refund to paying more tax. This sort of shakes a



. . . each came up with different . . .

fellow up, even if there are those who say the Internal Revenue Service might come out the same way if its different offices were given the same test.

Some of the tax firms were quick to point out that tax calculation isn't an exact science, and that a lot of the calculations depend on how your helper interprets tax court rulings. It takes interpretation, they say, and the tax courts themselves are forever applying the same principle differently—depending on wrinkles in the circumstances of the par-

ticular taxpayer. So, as soon as you toss in any sort of complications on a return it might well be figured to come out differently according to how the individual "expert" sees the rulings.

But when all that is said and done, the question remains: "If different experts can fully justify giving different results from the same data, how can you do any worse on your own as long as you do your honest best?"

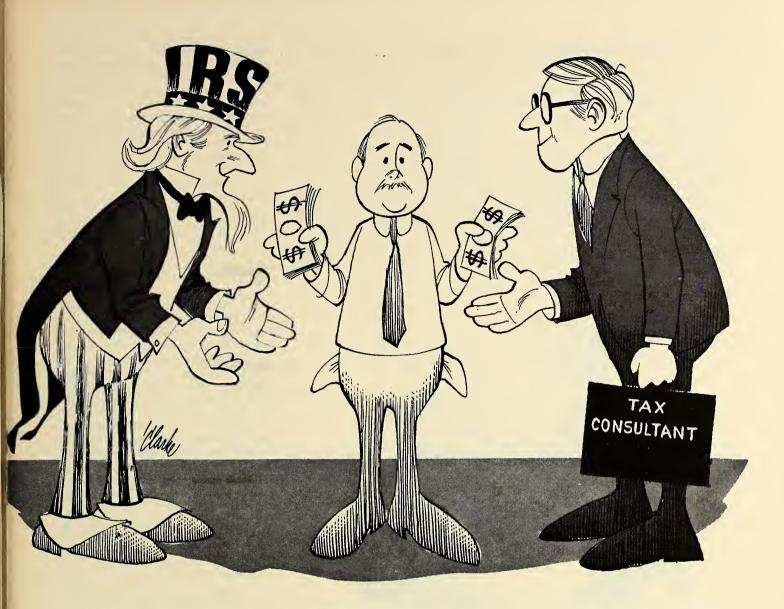
It's hard to see how you can, if one paid expert will tell you to pay more tax and another will tell you to file for a nicc refund—both using the same information. Their reasons for being so far apart, no matter how good, don't seem to solve your problem.

A further shadow fell across the mass



. . . taxes due on the same data.

tax counselors in 1971 when it was revealed that a few of them had been peddling personal income information which taxpayers took to them in confidence. During the year, Congress wrote a new law to make it a crime for any of them to do that anymore. Apparently, it hadn't been well covered by law before.



If this revelation costs them some business this year, it serves some of them

The upshot of all this is that the whole subject of getting help on your tax return is now discussed on the cover of your 1971 tax form and instructions by the Commissioner of Internal Revenue, Johnnie Walters. The Commissioner tries to discourage ordinary folks with ordinary incomes from paying for help. In the case of almost 30 million taxpayers, he says, "There is no reason for anyone . . . to pay to have his return prepared by someone else-unless he has a complicated personal situation."

Supposedly, almost anyone whose income isn't over \$10,000 or so can take the standard deduction and do as well as if he figured his own deductions. If he'll fill out his income information and elect the standard deduction, he can send the form to IRS and it will figure the tax at no cost. But if you're paying interest on a mortgage and a fat tax on your house, you may see at once that just these two items may well take you over the standard deduction even if you are in the \$10,000 or less class.

The standard deduction is terribly complicated, and over a matter of a little bit of money. Further, if your income is under \$10,000, there is no place on Form 1040 for you to figure what the standard deduction would be. You are simply referred to tax tables, in which it has already been calculated. You'd have to work out the entire tax to the bitter end-taking your own deductions-to see if that would be better or worse than the tax in the tables.

But maybe we can help some joint return filers to compare the deductions without figuring the whole tax. Your standard deduction on a joint return will be \$1050 on any adjusted gross income (line 18) up to \$8,076.90. Above that it will be 13% of the actual figure on line 18—up to adjusted gross income of \$11,538.42. On income one cent more than that, or higher, the standard deduction is \$1,500. If you can beat that by taking your own deductions, you're well advised not to take the standard one.

In the end, nobody but you can decide if you should file your own return or get help. All anyone else (like myself)

ILLUSTRATED BY BOB CLARKE

can do is offer advice and information on which you and nobody else will make the decision. The key questions are:

- (1) How much help do you really need?
- (2) How much help can you really get? (3) What sort of help is available?

When we talk about the average person (with no really unusual income or expenses) the biggest task in filing income tax returns is the sheer labor and record-keeping involved in putting all the information together.

Let it be clearly understood that nobody can spare you this labor.

If you ask help from IRS (and you can get it free), they will require you to put all the information together.

If you pay for help from H&R Block, Sears or one of the other mass tax counselors, they will require you to put all the information together.

Do not think that anyone who helps you will take this work off your shoulders. It is quite obvious that you must say how much wages, tips or salary you earned; how much you got in dividends; how much was withheld from your pay; how much mortgage interest you paid; how much you gave to the Red Cross;

CONTINUED Why Pay to Have Your Income Tax Figured?

how many dependents lived with you during the year, and so on. Many people who put such information down on Form 1040 have nothing left to do but add and subtract as told.

There is no help available anywhere to put your informaton together if you don't keep a private accountant. If you think you can pay anyone else to save you work, forget it. The only help anyone can give you is expert counsel, if you need it, on how to use the information after you've done the job of assembling it—and in doing the arithmetic correctly. Probably most people who pay for help are only paying to have their information transcribed from one form

to another and the numbers added up. If you do the arithmetic wrong yourself you can rely on IRS to correct it after you send it in, with no more penalty than the interest due (after April 17) on any amount that you underpaid due to an arithmetical error.

No matter who helps you, you must sign your return and accept responsibility for it. If there are fraudulent statements in it you take the rap. Even if you allow your adviser to talk you into misstating facts about your income or expenditures to get some little advantage—as no reputable adviser should do—the responsibility for the falsehood is yours. It may be his, too. Last year, a grand jury

indicted a tax consultant on 50 counts of willfully assisting in fraudulent tax returns over a three-year period.

Honest mistakes are treated more tolerantly. The number of arithmetic errors on tax returns is enormous. If they result in too little payment, the government doesn't send you to jail. It asks for the money still due, plus interest if it is overdue. But a lie is never treated as an honest mistake, even if a mathematical error is.

We tend to make math errors in our favor. Last year, 2.8 million people made errors that brought them refunds worth \$212.3 million, while over 4 million tax-payers made errors in arithmetic that required them to ante up an additional \$507 million.

Make sure that you pay your federal tax to the Internal Revenue Service and nobody else. There have been cases of local fly-by-night "tax consultants" who got clients to pay their taxes to *them*, on the basis that they'd handle everything. When they flew in the night with the taxes, the suckers still had to pay IRS.

Then there are people who think the consultant who helps them will pay them their tax refund, if one is due. Not so. You will get your refund from IRS or nobody.

Where some people need more help than others is in deciding what information—painfully assembled by themselves and nobody else—aptly and correctly applies to cach line on the form. The brief instructions that accompany your Form 1040 will cover most cases if you can understand them.

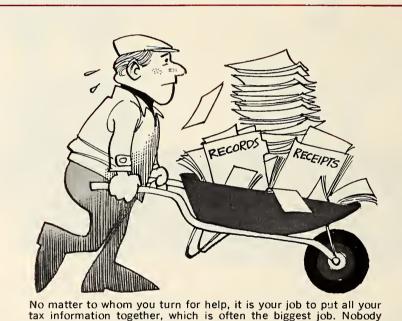
Therefore, the very best advice to everyone is to fill out a dummy of Form 1040 and any applicable "schedules" yourself. IRS gives you duplicate copies. Use them.

Only if you bog down and just don't know how to do something right, do you really need help, if your income and expenses were routine. You could bog down for a number of reasons. For instance, you might not understand an instruction at all. In spite of the optimism of the Commissioner, not everyone among all those 30 million people can understand the language of the instructions as well as others.

If you run into something you just can't interpret, you could try first for free help. Any IRS office will give it to you, it says herc.

But you may run into the fact that however willing IRS is to help you, there just happens to be a line a million miles long at your IRS office during any hour you can get there, and its phones are all busy, too. At this point, you might go ahead and pay one of the mass counseling firms, unless they have as long a line and as busy a phone.

But the chances are that most average people who fill out a dummy Form



will do it for you unless you hire a private accountant.

Medical deductions are so complex that a family that has had un-

1040 will find they can fight their way through it, just by doing most of the work they'd have to do anyway if they got help.

Consider now that if you do run into real trouble, it is going to be about something in particular. Not the whole form. Any fool can answer most of the questions—like what's your name and your spouse's name and how much does it say on your employer's W-2 form that you were paid in wages for the year, and what's your social security number? Even if any fool thinks he can't do that, anyone he gets to help him will tell him he has to. *They* won't tell him his name.

So your trouble, if any, will be about taking off a dependent, or what part of a dividend can be called a capital gain, or what taxes you paid can be deducted and what taxes can't, or some other particular thing or things.

Sùppose you carefully read the brief instructions that come with the form and still can't interpret them. You may need help—and paid help—in the end. But first you can read longer instructions in a single thick booklet put out by IRS: "Your Federal Income Tax 1972 Edition." Ask IRS for it, or maybe your post office. It costs 75¢. It has more detailed versions of the instructions than come with the tax forms.

If that fails, IRS puts out whole pamphlets on each of the special tax subjects that bug people. I have in hand a sevenpage IRS publication called "Child Care and Disabled Dependent Care," covering only the tax provisions in that field. There are many others, such as "Deduction for Medical and Dental Expenses" (eight pages); "Tax Information on Repairs, Replacements and Improvements" (four pages); "Information on Self-Employment Tax" (eight pages); "Tax Information for Students and Parents" (eight pages); "Tax Information on Deductions for Homeowners" (eight pages), and so on and on. Others cover rent and royalty income, sick pay adjustments, scholarships and fellowships, and include a 20-pager called "Taxable Income and Non-Taxable Income." There are about 80 of these, each on a narrow tax subject.

Now I know as well as you do that it can make your blood boil to have to put in hours if not days or weeks of work assembling information and wading through some of these instructions in order to ante up. If you could pay someone a reasonable sum to take it all off your hands, how nice it would be. But I come back to the fact that unless you hire an accountant to keep book on your money affairs for you, most of the work is in your hands anyway.

Probably, one of the best ways you can help yourself with your tax return (if you don't already do it) is to keep your personal records better all year

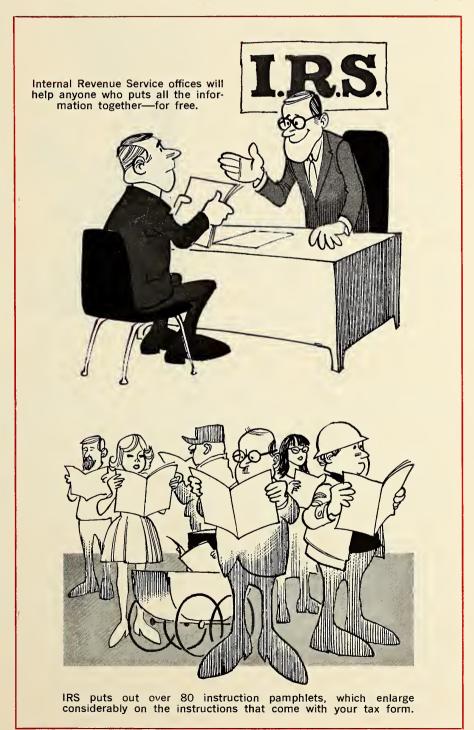
long. I wouldn't recommend any one way. But most of the March-April sweat is a headache over the facts of your financial life for the previous year (many forgotten, lost or never recorded). So some record system that is easy for you to keep *complete* month by month may be a lifesaver come April.

I know a guy who stuffs his paid bills, receipts and income data—month by month—into a set of white envelopes, noting on the cover the amounts that apply to one or another line of the tax form as he stuffs them in. He adds this task to his monthly bill-paying chore. At the end of the year he seals the envelopes, adds up the various tax figures

on the covers, and says it's all worth it, come April. He uses the figures on the envelopes for his tax form, and holds the contents as proof.

For items he doesn't pay by check, he and his wife get receipts and toss them into a bowl, as a daily practice. Whenever time hangs heavy during the year, they fish some out, record their tax data on envelopes labeled "cash transactions," stuff them in and seal the envelopes. No bookkeeper would do this, but personal record keeping is very much a matter of what fits your personality, and this couple sort of makes a game of their peculiar system.

The husband says it beats going



CONTINUED Why Pay to Have Your Income Tax Figured?

through his checkbook at the end of the year to see what he spent or deposited and how it applies taxwise. On January 1, he says, he's all ready for IRS and has to wait for his employer's W-2 form.

Whether you get help or don't, you need your information complete and provable—and anyone who helps you file your tax return can do better by you the more complete your information.

So far this discussion has been chiefly aimed at average people whose income and expenses are fairly usual. As the Commissioner says, most people don't need to pay for help unless they have "complicated personal" situations. To that I have added "and unless the instructions are unintelligible to them, as they well may be for some."

So how about people with "complicated personal situations?" This may be quite a few people, since my observation is that more people have complicated personal situations than don't. In fact, everyone seems to have his own brand of complications. I asked a tax expert of many years standing if he would name a complicated personal situation in which an average person might well seek paid help. Quick as a flash he said: "If a family has had unusual medical expenses, no matter its income bracket, I would recommend their paying a reasonable sum for advice. The medical deduction provisions are so damnably complicated and devious that I think it's a sin to expect the man in the street to find his way safely through them if his medical expenses have been large." He went on to say that if average people have had unusual sources of income it might also be worthwhile to pay a few bucks for expert help.

To see what he means, here's a brief summary of a few of the things gleaned from special pamphlet #502 on medical deductions:

Medical and dental expenses (not paid for by medical insurance) are deductible for yourself, your spouse and dependents if they are itemized on a form, Schedule "A." Such expenses, including all medical insurance premiums paid by you, are deductible only to the extent that they exceed 3% of your adjusted gross income. But half of medical insurance premiums up to \$150 arc deductible anyway, unless IRS quarrels about the nature of the policy.

Allowable to try to get over that 3% of adjusted gross income are all your medical insurance premiums, payments for doctors, dentists, hospital services, charges for medical care, payments for eyeglasses, false teeth, hearing aids, crutches, guide dogs for the blind, etc. But note: To get your total medical expenses over 3% of your adjusted gross income you may only count that part of

your drug and medicine costs that exceeds 1% of your adjusted gross income. Simple? In a pig's eye it is. Vitamins and iron supplements, the IRS says, are not drugs and therefore not allowable. However, a 2-ounce slug of whiskey to help a cardiac sufferer is deductible to the extent of the prescribed amount of alcohol. Disallowed also are trips to balmy environments even though your physician may recommend such for your health improvement. So too, are the costs of such benefits as health clubs, YMCA dues and other health promoting activ-



You will have to wait at least ten weeks for a refund this year.

ities not prescribed to cure a disease.

Unless your medical expenses were exceptional, you will probably find that you go to all the labor of figuring them in vain. They won't exceed 3% of your adjusted gross income, and all that'll be left to take off will be \$150 or less of medical insurance premiums. I shudder to think how many people have worked hours or days to figure their medical deductions, only to find they didn't exceed that 3%. I shudder more to think what they muttered to themselves when they did the last bit of arithmetic and found it was labor wasted.

As for unusual forms of income, here's a bit condensed from special pamphlet #525, concerning income:

All income must be reported that is received in the form of money, property and services unless exempt by law. Specifically, if you sell an item of personal property such as a boat, the gain on the sale is taxable. However, losses from such are not deductible. Side commissions from push money, kickbacks or similar payments are to be included as income. Gambling winnings are income

but losses incurred during the year are only deductible to the extent of your winning. Proceeds from lotteries, raffles etc., are income. If you win a color TV, car or other non-cash prize you must include it as income at the fair market value. However, awards presented for accomplishment in socially worthwhile fields are not taxable. Pulitzer and Nobel prize winners owe no tax on their cash awards. The test: recipient is selected without action on his part and is not expected to render any future services. Income from a hobby is a taxable item; losses sustained in pursuing the hobby are not deductible. Christmas gifts if they are of nominal value are not taxable. This means a turkey or a box of select fruit from your boss doesn't have to be declared. On the other hand, cash and gift certificates from your employer are looked on as additional income.

I kept on asking my tax expert for other "complicated personal situations" that might well justify taking them to an Internal Revenue Service office or a paid adviser. And he kept giving me more.

adviser. And he kept giving me more. "Good Lord," I said, "how is any general advice possible?"

"There's one piece of general advice," he said. "Anyone is a fool not to try to fill out Form 1040 himself first, reading the instructions. Most will succeed.

"Those with personal complications will run into any areas on which they need help when they make a dry run through the form. By doing the best they can, on their own at first, they'll improve the chances that whoever they go to for help will be able to help them."

If trying to do it yourself, and putting all that information together, runs you past April 17 this year, it is now possible to get an automatic extension to put off filing your final return and making your final payment for 1971 until June 15 at the latest. You do this by filing Form 4868 on or before April 17. This is not exactly a boon. IRS expects you to pay a good guess by April 17. It will charge you ½ of 1% on the unpaid balance that runs past April 17. And if you don't pay at least 90% of the final tax by April 17 it will charge you an extra 1/2 of 1% penalty. But you do have an automatic way to get an extension if you're willing to pay for it.

If you have a refund coming, IRS says you can expect to wait at least ten weeks. It doesn't think it can really get refunds going until after the bulk of the returns are in.

Another bit of news this year is that the tax bill belatedly passed by Congress in December lets you deduct a \$675 exemption for each eligible dependent, instead of 1970's \$650. And for 1972, you can take off \$750 for each such dependent. You won't need any help on that, for it's all clear on the forms.

THE END





ORDER IN CONGRESS? A WAY TO AMEND CONSTITUTION. MINIBIKE MENACE WARNING.

It just might be that 1972 will be the in which Congress decides to give up legislative and fiscal chaos for some semblance of order by making two changes in procedures urged since 1950 by Sen.

Warren Magnuson (Wash.).

Magnuson would begin the fiscal year of the U.S. Government, now running from July 1 to the next June 30, to coincide with the calendar year, January 1 to December 31. He would also end the annual Congressional consideration of legislative bills—now over 10,000 per session—on August 15, and then concentrate the remainder of the year on appropriation measures, excepting only emergency legislation.

By making these two reforms, Senator Magnuson believes Congress would better serve the country and itself. In recent years, Congress has increasingly been unable to meet the fiscal June 30 deadline for new appropriations, and often has run six months late. Magnuson's idea also calls for an end to each session by

December 1:

Last October, the Senate unanimously adopted a measure which for the first time sets ground rules for amending the Constitution through national convention. Quick House approval is doubtful in view of the opposition of Rep. Emanuel Celler (N.Y.), chairman of the House Judiciary Committee, who is reluctant to make it any easier to change the Constitution.

Fact is, the convention has never been called since our Constitution was ratified in 1788. In 1969, however, a move by the late Sen. Everett Dirksen (Ill.) to call a convention aimed at overturning the one-man, one-vote ruling of the Supreme Court fell only one shy of the 34 states needed. But the Constitution does not specify how the convention is to be called, and some Congressmen fear a convention, once called, might amend the Constitution as it pleased.

The pending bill requires approval by

two-thirds of the states; two-thirds

of the delegates to the convention, and ratification by three-fourths of the state legislatures. It also lays down procedures, and limits the convention to considering the specific amendment for which it was called.

The federal government, which already regulates the movement of most forms of transport, is casting a paternalistic eye at the youngsters who've taken to

the minibike.

Officialdom here figures that some million and a half minibikes are bouncing around the United States endangering not only unwary citizens, but more especially the riders themselves. The minibike set. ranging from tots to 14-year-olds, so far appears to be the chief victim of the mitey motorcycles, with at least 20 fatalities in the past year.

Several federal agencies are demanding federal safety standards for the minibike, either as a dangerous toy or as

a hard-to-handle vehicle.

PEOPLE AND QUOTES -

OTHER GOVERNMENTS

"The fact that other governthat's where our mutual security interests are." Vice President Agnew.

PRODUCT OPTIONS

"In the days ahead, the management of any consumergoods company is going to have only two options—build a trouble-free product, or be ready to fix the product fast." S. E. Knudsen, chairman. White Motor Co.

U.S. ECONOMIC SYSTEM

... despite the ever present criers of crisis, there is no desperate condition or fundamental weakness in the American economic system today." Maurice H. Stans, Sec'y of Com-

HE'S MISUNDERSTOOD

"The fact that other govern-ments of both the right and the they'd realize that on many of left may not be as representathe the things they discuss about tive as ours should not . . . pre- me so avidly, I haven't any tive as ours should not...pre- me so avidly, I haven't any vent our cooperating fully if views." John Connally, Sec'y

U.S. STILL THERE

"Notwithstanding the dim-inution of the U.S. military presence abroad, the U.S. is not about to disappear from the international scene." Sen. Mike Mansfield.

SLOW WEAPONS

"Words may be weapons, but at the United Nations they wound exceedingly slow." Daniel P. Moynihan, U.S. delegate to UN.

ONLY SELF-DEFENSE

"It is so clear there is no resurgence of militarism in Japan . except for self-defense.' Japanese Ambassador Ushiba.

When the Titanic Went Down

An account of the disaster, 60 years ago, that holds a fascination in memory undimmed by time.

By PEGGY ROBBINS

THOUGH SHIPS have been lost at sca since time immemorial, the sinking of the brand new Cunard White Star transatlantic liner *Titanic* 60 years ago this April 15 has held a fascination in memory that is undimmed by time.

The tale of the *Titanic's* loss with more than 1,500 of those aboard—including dozens of world-famous people—is a rare mixture of human bravery, nobility, folly, vanity and misplaced confidence.

The setting of the stage for a disaster could hardly have been improved upon by an ancient Greek tragedian. The Titanic was the "unsinkable" ship on a trip of festivity and splendor. But sink she did, and from a grazing brush with an iceberg which many of those aboard hardly felt. She was the greatest ship of her time on her maiden voyage, with the eyes of the world upon her, when she dived to her grave on a clear April night with not enough lifeboats for half her human cargo. Most of the dead had time in which to see their fate coming, and behaved themselves in the tradition which drama expects of actors on a great stage. There are, in fact, few stories in fiction and fewer in real life to match the detail-by-detail unfolding of the sinking of the Titanic.

In 1912, the *Titanic* was the largest and most luxurious liner ever built—"a giant floating palace," "Empress of the Ocean," "a sumptuous traveling city one sixth of a mile long." And, particularly, she was "unsinkable," the absolutely safe vessel. She was planned to be fast, but most international attention was directed to her upcoming position as a "dependable Atlantic Ocean ferry." She'd make her speed regardless of adverse weather and water conditions, on a tight schedule—and with complete safety.

Many factors played a part in the *Titanic's* sinking with the loss of all except 705 of her total company of some 2,340 persons. (There is disagreement to this day as to the total number aboard, but 2,340 was the number reported by Purser McElroy after a checkup shortly after the ship sailed.) The disaster was due to a combination of unusual circumstances that had never occurred before and has never occurred since. But, likely, no cause-factor was as basically responsible as the absolute, worldwide

conviction that the *Titanic* was unsinkable. Why worry about the number of lifeboats on a "floating city" that could not sink? Why swap the warmth and comforts of the unsinkable *Titanic* for a small, dangerous lifeboat in the freezing Atlantic, even if an iceberg *had* punctured the liner's hull? The ship was "watertight," constructed with a double bottom and divided into 16 watertight

previous shipbuilding with "a luxury liner of staggering dimensions." Her keel was laid in the summer of 1909 at the Belfast shipyards of Harland & Wolff. Lord Pirrie, the head of Harland & Wolff and one of the world's most noted authorities on shipbuilding, was her basic planner. Lord Pirrie's nephew, Thomas Andrews, did most of the designing of the ship. Then, as Managing Director of Harland & Wolff, he supervised every detail of her building. Andrews, one of the most highly respected men in the shipbuilding world, sank with his ship without trying to save himself.

The Titanic was launched on May 31.



Crowds at the New York American await latest bulletin on fate of ship's passengers.

compartments formed by 15 bulkheads that ran completely across her. She wouldn't sink with three or four of those compartments flooded. Certainly, she'd float right on with any two full of water, which could occur only in the unlikely event of a rupture at the very juncture of two compartments. Who could imagine a worse collision than one which might cause that?

At Southampton, just before the *Titanic* sailed, Mrs. Albert F. Caldwell, a second-class passenger who survived, watched deckhands loading luggage and pleasantly called to one of them, "Is this ship really nonsinkable?" "Yes, indeed, lady," he replied, "God himself could not sink this ship!"

It was early in 1908 that White Star officials planned the *Titanic* to eclipse all

1911. Her outfitting was completed in February 1912, at a total cost of \$10 million. She was a sister ship of the *Olympic* but she was somewhat larger and much more luxuriously outfitted.

She had a gross weight of 46,328 tons, with a 66,000 ton displacement. She was 882.5 feet long and 92.5 feet wide. She measured 175 feet from her keel to the top of her four great funnels. Of the finest steel construction throughout, she had 3 million rivets holding her thick steel plates together. Each link in her anchor chains weighed 175 pounds. Each of her three propellers was driven by its own super power plant. Those engines, which were driven by 29 huge boilers and 159 furnaces, gave the *Titanic* a registered horsepower of 50,000 and an average speed of 21 knots. But

'All the News That's Fit to Print."

The New York Times.

WELL LIE .. NO. 11.

TITANIC SINKS FOUR HOURS AFTER HITTING ICEBERG; 866 RESCUED BY CARPATHIA, PROBABLY 1250 PERISH; ISMAY SAFE, MRS. ASTOR MAYBE, NOTED NAMES MISSING

Col. Astor and Bride. Isidor Straus and Wife. and Maj. Butt Aboard.

"RULE OF SEA" FOLLOWED

Women and Children Put Or

PICKED UP AFTER 8 HOURS

Vincent Aster Calls at White St

FRANKLIN HOPEFUL ALL DAY



OF THE SAVED.

er, Mrs. H. B. Harris, and a

Biggest Liner Plunges to the Bottom at 2:20 A. M.

RESCUERS THERE TOO LATE

Except to Pick Up the Few Hundreds Who Took to the Lifeboate

WOMEN AND CHILDREN FIRST

Cunarder Carpathia Rushing to Survivors.

SEA SEARCH FOR OTHERS

The California Stands By on nce of Picking Up Other Bosts or Rafts.

OLYMPIC BENDS THE NEWS

thip to Flash Wireless Mon-

CAPE RACE, N. F., April 15.
The White Star liner Olympic --- The White Star liner Olympic reports by wireless this evening that the Cunarder Carpathia reached, at daybreak this morning, the position from which wireless calls for help were sent out last night by the Titanic after her collision with an isceter. The Carpathia found only the liceboats and the weekare of what had and the wreckage of what had been the biggest steamship affoat. The Titanic had foundered at about 2:20 A. M., in latitude 41:16 north and tongitude 50:14

Headlines in New York Times announce loss of the "unsinkable" Titanic.

she could easily develop 55,000 horsepower and make 24 to 25 knots at full speed.

CAPT, E. J. SMITH,

She had a crew of 860, of whom 65 were engaged in navigation, 320 were engineers, and 475 were stewards, cooks and the like. Her commander was Edward J. Smith, the highly esteemed senior captain of the White Star Line, a patriarchal figure with a white beard, wrinkled eyes, and a quick, rolling gait. After 38 years service with the line, he'd planned retirement, but had agreed to command the Titanic at the urging of White Star officials, who undoubtedly recognized that Captain Smith had a staunch personal following in the North Atlantic passenger trade.

On March 31, 1912, the Titanic passed her trials before the Board of



Drawing depicts women and children boarding lifeboats as prow of vessel sinks lower into water. Lifeboats were not filled to capacity and many died needlessly.

CONTINUED

When the Titanic Went Down

Trade at Belfast and sailed for Southampton. At noon on Wednesday, April 10, she steamed majestically out of Southampton's port, bound for New York on her maiden voyage, while bands played and crowds cheered. The vessels she passed were dwarfed by this colossal new queen of the ocean.

The Titanic had accommodations for about 2,500 passengers. Of the approximate 1,480 booked for her first voyage, roughly one fourth were traveling first class, one fourth second class, and one half third class. Elaborately furnished cabins opened onto the higher of the ship's 11 decks. A few super-luxurious suites had private promenades, and each of those went for \$4,350 for the maiden voyage. At the other extreme of passenger accommodations were the steerage bunks lowest in the ship and closest to the bow, which cost considerably less than first-kennel dog passage. The families traveling first class had with them 23 maids, eight valets, and a number of governesses and nurses. The personal servants had their own private lounge. In addition to splendid suites and cabins, the ship had just about everything-a theater, two swimming pools, squash and tennis courts, a miniature golf course, sun parlors, a palm garden, libraries, a Turkish bath, several restaurants in addition to the main dining saloons, a billiard hall, ballrooms, lounges, a concert hall, a gymnasium, promenades and four elevators—everything except enough lifeboats to hold all her company.

The *Titanic* sailed under safety regulations which included outdated and absurdly inapplicable lifeboat requirements. All British vessels over 10,000 tons had to carry 16 lifeboats with a total receiving space of 5,500 cubic feet, plus rafts and/or floats with 4,125 cubic feet. The total of 9,625 cubic feet thus required provided boat space for 962 people. The *Titanic* exceeded the legal requirement. Her sixteen 30-foot wooden boats and four canvas collapsible lifeboats had space for 1,178 people.

That was 216 more than then required.

But they could only hold a third of the number of people the *Titanic* expected to carry one day, and only about half of those who were aboard on her maiden voyage. Her davits could actually have handled 48 lifeboats, more than enough to have saved every one on board when she sank.

Among the *Titanic's* passengers were some of the most distinguished men in the 1912 world, nearly all of whom died. Several were men whose fortunes ran into tens of millions. They included Col. John Jacob Astor, who was



The liner Carpathia arrived in the area about an hour after the Titanic sank and began

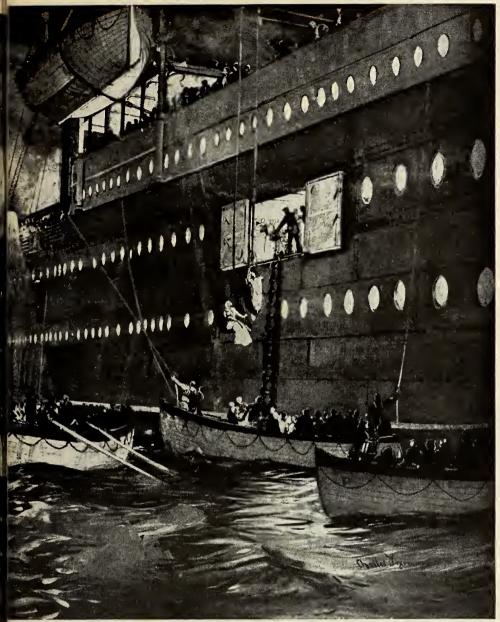
returning from a trip to Egypt with his 19-year-old bride (Astor's fortune was estimated at \$150 million); Isidor Straus, a partner in R. H. Macy & Company (\$50 million): Benjamin Guggenheim. mining and smelting king (\$95 million): George D. Widener, prominent Philadelphia financier and traction magnate (\$5 million); and J. Bruce Ismay, Managing Director of the White Star Line (\$40 million).

Among other prominent passengers were handsome Washington Roebling, II, steel heir and manager of the Mercer Automobile Works in Trenton, N.J.; Charles M. Hays, president of the Grand Trunk Railway; Howard Case, London manager of Vacuum Oil; W. T. Stead, a leading British evangelist, editor, and publicist; Jacques Futrelle, famous journalist; Henry B. Harris, a Broadway producer; Maj. Archibald Butt, military aide to President Taft; Frank D. Millet,

noted American painter; John B. Thayer, a vice president of the Pennsylvania Railroad; Arthur Ryerson, steel magnate, and Col. Archibald Gracie of the United States Army, a socially prominent retired officer. Of all the abovementioned men, only Bruce Ismay and Colonel Gracie survived the *Titanic* disaster, and Gracie did so by a nearly miraculous underwater escape from the sinking ship.

Ismay—as White Star Line Managing Director—occupied a rather peculiar position aboard the *Titanic*. Sometimes he seemed to be almost a member of the crew—usually, a sort of super-captain. At other times he was very much a passenger, enjoying the social festivities and entertaining in his deluxe suite.

Thomas Andrews, the ship's builder, was aboard to iron out any kinks in her operation. He knew every inch of her. He meant to spend his days roaming her



picking up survivors—there were 705, some 465 short of the Titanic's lifeboat capacity.



John Jacob Astor



Isidor Straus



Benjamin Guggenheim



Washington A. Roebling Some of the distinguished dead among the Titanic's passengers.

coal bunker from the day she sailed from Southampton. J. Dilley, a fireman on the ship, later testified, "... my sole duty, together with 11 other men, had been to fight that fire. We had made no headway against it The fire started in Bunker No. 6. There were hundreds of tons of coal stored there . . . The wet coal on top kept the flames from coming through, but down in the bottom of the bunkers the flames were raging The

sinking ship, terrified that they'd be

On top of that, the Titanic had an unquenchable but controlled fire in a

sucked down with her.

stokers were alarmed over it, but the officers told us to keep our mouths shut -they didn't want to alarm the passengers."

Indeed, for four and one-half days the passengers on the luxury liner delighted in what they told each other was the "perfect voyage." The huge vessel moved with a minimum of pitching, rolling and vibration. She made 484 miles on her first day's run, 519 on the second day and 549 on the third. One of the favorites of the passengers many diversions was participation in betting pools on the daily runs. Bruce Ismay, without consulting Captain Smith, had set the ship's New York arrival time at Wednesday morning, but junior officers confided to passengers that it seemed a safe bet to place docking time at Tuesday night.

On Saturday night, some of the passengers enjoyed a movie, and others a concert; many attended the late dance in the grand ballroom. The Titanic's eight-member band, the best on the Atlantic, included Bandmaster Wallace Hartley, pianist Theodore Brailey, cellist Roger Bricoux, bass-violist Fred Clark and first violinist Jock Hume, all noted musicians who were soon to prove themselves extraordinarily brave men.

On Sunday morning, April 14, the



Charles Melville Hays



Wililam T. Stead

and searching for imperfections, and his evenings with charts and blueprints, working out his recommendations. Members of the crew began bringing their problems to him from the first, and no complaint was too minor for his consideration.

The Titanic's voyage began with an exciting incident as she left Southampton. The displacement of water by her

movement caused a suction which pulled the much smaller New York from her moorings, snapping steel cables as if they were twine. The two vessels almost collided before the giant's engines were cut off and the smaller liner was towed out of danger. No real damage was done, but Titanic passengers who watched the action were later to remember it as they tossed in lifeboats in the vicinity of the

usual religious services were held in the ballroom. By early afternoon, passengers exercising on deck in the fine, clear weather saw patches of drifting ice on the surface of the placid ocean. But that was not unusual. Ships on the northern express route often encountered ice in April, and seasoned travelers made play of sighting icebergs drifting silently in the misty distance. Actually, vast masses

When the Titanic Went Down

of ice drifted farther south in April 1912 than in any of the previous 50 Aprils, but no one on the *Titanic* that fated Sunday knew that ice conditions were abnormal.

The ship's lookout was doubled, with two men in the bow and two more in the crow's-nest. These men were not equipped with binoculars. It is possible, had they been, that the *Titanic* would have reigned as Empress of the Ocean many years instead of a few days.

Throughout Sunday the temperature dropped steadily and by night it was quite cold. The thermometer plunged from 45 degrees in the morning to 32 degrees at ten o'clock that night. The sea temperature was 31 degrees at 10:30 p.m. There was no moon, but the heavens blazed with stars. At 8:55 p.m., Captain Smith stood on the bridge talking with Second Officer Charles Herbert Lightoller, and the two remarked that they'd never seen a more brilliant night. The *Titanic* steamed on through the calm black waters at 22½ knots, Cap-

and on other ships, mostly just frivolous greetings prompted by the general fascination with the new miracle of wireless. Phillips had had a very difficult time getting the messages through, but at last he had a good contact with Cape Race, a relay point. When the *Californian* interrupted with a booming ice message, he barked back, "Shut up! Shut up! I'm busy! I'm working Cape Race."

The Californian was a 6,000-ton Leyland liner, bound from London to Boston. She belonged to the International Mercantile Marine Company, the same combine that owned the Titanic and other White Star liners. She'd been stopped since 10:30 p.m., blocked by drifting ice fields. The Californian's only wireless operator did shut up and just listened. Then, at 11:30 p.m., he closed down his set completely and went to bed, as was his custom.

About 11:40, Frederick Flect, one of the two men on lookout in the *Titanic's* crow's-nest, suddenly saw something looming directly ahead, getting bigger and closer by the second. He banged the crow's-nest warning bell three times, phoned the bridge and yelled, "Iceberg

BEOWN BROS.

This photo, a sad memento of all that remained of the Titanic—her lifeboats.

tain Smith had sent a wireless message to the New York offices of the White Star Line, reporting that all was well, and that with continued fair weather he expected to dock his ship early Tuesday evening.

During the evening the *Titanic* received five wireless warnings of ice fields, including one from the *Olympic*, headed east, and another from the *Baltic*, also a White Star liner. Then, about 11:00 p.m., she received a sixth ice message, this one from the *Californian*, a ship which much later testimony placed as only ten miles distant. The *Titanic's* First Wireless Operator, John George Phillips, had been swamped all day with messages sent by passengers to friends at home

14

right ahead!" About a minute later, the liner's bow swung to port and the glistening mountain of "blue berg" glided swiftly by the starboard side. Quartermaster George Thomas Rowe, standing watch on the after bridge, estimated that the iceberg reached 100 feet above the water. All the lookouts sighed in relief. They thought at first that the great ship had "grazed an iceberg in a very close call." They didn't know that the knifelike edge of one of the iceberg's protruding underwater spurs had sliced holes in six of the Titanic's compartments.

At this time, First Officer William M. Murdoch was in charge of the bridge of the *Titanic*. Later, two of the ship's seamen testified that Murdoch was tardy

answering the phone call from the crow's-nest and that, had he answered it promptly when it first rang, he would have had some minutes in which to swerve the liner sufficiently to avoid contact with the berg. Officer Murdoch did not live to offer defense.

So slight was the shock of the collision with the berg that sleeping passengers in the upper areas of the ship were not awakened by it. A group of off-duty dining-saloon stewards in the first-class section noticed a slight grinding jar and ceased their gossiping long enough to wonder if the ship had dropped a propeller blade. In the first-class smoking room, a party of men who were drinking and playing cards noticed "a bit of rumbling noise" and felt "sort of a quiver," but there was no alarm. Some of the livelier ones went out on deck, and two or three even saw the iceberg vanishing into the darkness astern. They returned to their card games.

To Bruce Ismay, in his suite, the "slight jar" needed more explaining. Hc pulled a suit on over his pajamas and headed toward the bridge. Thomas Andrews, in his statcroom, surrounded by stacks of charts and plans having to do with the Titanic, was so absorbed in the blueprint on which he was working that he didn't even notice the jar. The *Titanic* had a spacious "writing room," planned as a place where the ladies might gather after dinner. But traveling ladies no longer chose to "retire to a writing room away from the men," and Andrews was drawing plans to convert the room to better use.

As First Officer Murdoch had the ship brought to a stop, Captain Smith hurried onto the bridge from his cabin by the wheelhouse. As soon as the captain heard about the iceberg and was assured all emergency doors had been closed, he sent men to inspect various areas of the liner, and he sent for Andrews. The two of them toured the ship to determine if any scrious damage had been done.

What most of the passengers really noticed was the unusual silence and lack of motion as the ship came to a stop. Lawrence Beesley, a young, British, public school science teacher traveling second class, lay in his bunk reading as the collision occurred. He had previously been sharply conscious of the increased vibration of the ship, which he had correctly attributed to greater speed. Now he suddenly realized his spring mattress was no longer vibrating. Yet he had not the slightest idea the liner had been slashed open and water was pouring in her side.

But there were some on the ship who knew trouble was at hand. The starboard steerage passengers down below had been tossed out of bed by the collision. A number climbed up to the third-class recreation space on the starboard well deck and saw there several tons of ice that had fallen off the berg. Some of the steerage passengers in the bow came off their bunks into water that crept up around their feet as they dressed. Many men working down in the ship certainly didn't have to be told the situation was bad. Fireman Fred Barrett and Assistant Second Engineer James Hesketh had to leap for their lives as the sea came swirling in around the valves and pipes in Boiler Room No. 6 and an emergency

12:15, Phillips began tapping out "CQD," which at that time was the usual international distress call, followed by "MGY," the *Titanic's* call letters, and her position, "41.46 N., 50.14 W." As he continued sending, he said to Bride, "But of course nobody will believe it." Neither, at first, did the two operators believe there was any real danger. "Send 'SOS,' the new call . . . it might be your last chance to send it," joked Bride after a while. Phillips laughed and switched to the "SOS" that an international con-

her stern went under. That was far from the case, as the accident had occurred just off the Banks of Newfoundland, where the ocean is more than two miles deep.

The Titanic's distress call was an

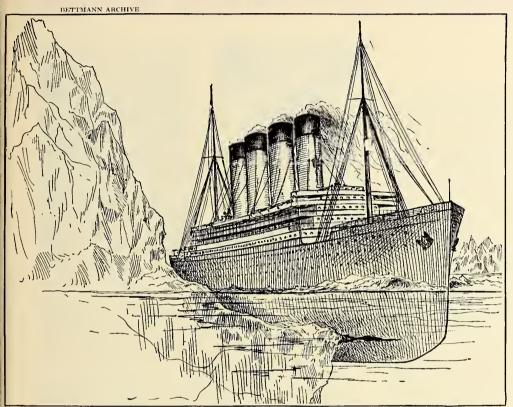
The Titanic's distress call was answered by several ships, notably the Frankfort and the Carpathia. The Frankfort was too many hundreds of miles away to offer prompt assistance, but the Carpathia, a Cunarder under the command of Capt. Arthur H. Rostron, wirelessed that she was "only 58 miles away and coming hard." Yet, to those on the Titanic who realized how desperate the situation was, the best chance for help scemed to be from the vessel whose lights could be seen in the distance and whose lookouts could unquestionably see the rockets the Titanic was sending up. This ship, which ignored the distress rockets, was later identified in two official inquiries as the Californian, Wireless operators of at least two other vessels. both at a great distance, later said they picked up weak distress calls from a ship purporting to be the *Titanic* and that their superiors were inclined to think the whole thing a practical joke.

Captain Smith moved about the ship calmly, shouting into his megaphone when the need arose, handling the situation as best he could.

Details of the loading of the *Titanic's* lifeboats vary greatly in the different survivor accounts. There was no set policy for their loading. Second Officer Charles Lightoller, in charge of launching the boats on the starboard side, with the captain's approval ruled "women and children first," and allowed only enough men, usually seamen, in each boat to man it. The first boats hit the water only half full. Lightoller, knowing the great danger of the boats buckling if lowered the 70 or 80 feet from the top completely loaded, and having a hard time getting the women to enter them anyway, started them down only partially loaded, with specific instructions that each boat was to pick up additional passengers, to its full capacity, "at the gangway doors as it became afloat." He sent the bosun's mate and six hands below to open the lower-deck gangway doors for this procedure. None of the seven was ever seen again and the doors remained closed. Lightoller worked on without letup, loading the later boats as full as he dared.

Later, at the same time that Lightoller was commended for his bravery and diligence, he was criticized for his "selective system" of loading the boats. It is well to remember that he *had* to make *some* fast selection for lifeboat space as there were far too few lifeboats to hold everyone.

Other officers worked just as faithfully (Continued on page 50)



Artist's rendition of collision that left a fatal 300-foot gash in Titanic's side.

door slammed down. Postal clerks working on the lower level of the *Titanic's* two-deck-level post office were sloshing in water up to their knees within five minutes after the collision. They dragged 200 sacks of registered mail to the upper level—wasted effort, as the water crawled on up to that level in five more minutes.

It didn't take Thomas Andrews long to assess the situation after he and Captain Smith determined that the ship had suffered a 300-foot gash. The *Titanic* could not float for many hours. But it was decided that, to avoid panic, the necessary measures would be taken in an attitude of precaution rather than doom.

Captain Smith ordered the lifeboats uncovered and instructed that stewards and crew members cover the ship, arousing people and telling them to get on deck with life belts on.

Then the captain went to the wireless shack and told First Operator Phillips and Second Operator Harold Bride to send out a call for assistance. About vention had shortly before agreed upon. So it was that at 12:45 a.m. on Monday, April 15, 1912, the first SOS in history was sent from the sinking *Titanic*. And, as it turned out, it was Phillips' last chance to send it.

Some of the passengers refused to get up at first, they were so sure it was all a false alarm. Some, still in evening dress, refused to leave the warmth of the lounges and smoking rooms. Many resented being herded to the boatdeck. It was ridiculous, they said, to consider lowering them in lifeboats when they'd just have to be hauled back up again onto the unsinkable Titanic. Even the mounting noise of steam roaring off at the exhausts and the increasing list of the ship as her bow settled deeper and deeper into the water failed to disturb a surprising number as many valuable minutes slipped by. One man in the smoking room watched his half-finished drink slide off the table and remarked that, even if the bow of the ship did sink, it would probably strike bottom before



Opposing Views by Congressmen on The Question . . .

SHOULD SCHOOL BUSING BE MADE

PTER SOME ten years of trial, compulsory busing of pupils to achieve racial quotas in our schools has been thoroughly discredited. The practice of assigning youngsters to schools on the basis of skin color goes directly counter to the ideal of "color blindness" which is incorporated in all of our civil rights law dealing with employment, fair housing and public accommodations

In addition, no hard evidence has been produced to demonstrate that the billions of tax dollars annually spent to finance a wide multitude of forced schemes have helped to educate culturally-deprived children.

At a time in our history when schools across the country find themselves having to go to shifts just so all children can go to school; when many school districts are in such dire financial straits that they are forced to cut back on the number of teachers rather than hire additional ones; when many school districts face such austere budgets that they have been forced to decimate sports programs and other extracurricular activities that contribute so much to the total development of our children—then what possible reason can there be to require taxpayers to spend billions of dollars to buy buses and hire additional bus drivers so that our children may have a daily ride across town?

There are those children, to be sure, who are educationally deprived. They need extra help. But I think it is ludicrous to suggest that two hours per day of traveling across town in a bus is going to enhance their education. I would much rather see taxpayers' hardearned money spent on meaningful educational programs such as pre-kindergarten training and enriched courses in reading, writing and vocabulary skills, to help these youngsters acquire those missing elements



Rep. Norman F. Lent (R-N. Y.) 5th District

of culture that other pupils take for granted.

Unfortunately, some Members of Congress have been reluctant to face up to this pressing issue, and my proposed Constitutional Amendment to preserve neighborhood schools has been pigeonholed in the House Judiciary Committee with little chance of reaching the whole House so it may be

debated and voted upon.

There is a way, however, to skirt the Committee's refusal to act on the busing issue. A simple majority of the House, by signing a "discharge petition," can force Congressional debate and a vote on the question of neighborhood schools.

Nearly 120 Congressmen have signed "Discharge Petition No. 9" which would bring my neighborhood schools amendment to a House vote.

If you feel as I do, that we must return to the ideal of providing our children quality education rather than seeing how many road-miles they can log daily, I urge you to write to your own Congressman and ask him to sign "Discharge Petition No. 9."

Mornan F. Lant

If you wish to let your Congressman or one of your Senators know how you feel on this

OPTIONAL BY CONSTITUTIONAL AMENDMENT?



Rep. Charles B. Rangel (D-N. Y.) 18th District

Americans are against discrimination and that they accept the fundamental Constitutional provision prohibiting it. Any child, black or white, has a right to be free from discrimination in our public schools. Thus he has a right to a desegregated education, not just occasionally, not in only one or two grades, but all along the

educational road. The Equal Protection Clause of the Fourteenth Amendment requires that discrimination be done away with—whatever the source.

The proposed amendment provides that no public school student shall be assigned to a particular school because of his race. The devastating effect of this option is to curb the equity powers of our courts to fashion remedies to end discrimination. Its adoption would render the right to be free from discrimination in admission to our public schools a meaningless sham.

Opposition to school desegregation often relies on irrelevant or specious arguments. First, the majority of children who ride a bus to school each day do so for reasons having nothing to do with racial or educational equality; they simply live beyond walking distance of any "neighborhood school." Furthermore, since students will travel by school bus for many years to come, Congress must take decisive action to establish rigid school bus safety standards—regardless of the present controversy.

The basic question of education has been senselessly transformed into one of race by paranoid visions of

issue, fill out the "ballot" and mail it to him.

minority group pupils wrecking suburban school buildings or mugging suburban children. The racial aspects, however, must be considered because many of the voices now so piously raised in opposition to busing their own children were strangely silent for decades as black children were bused away from their neighborhoods to segregated schools.

The issue of busing is a smoke screen behind which some hope to hide failure by generations of school boards, taxpayers and legislators to mandate and fund quality education for *all* children everywhere in this nation.

No parent, of any racial or ethnic heritage, likes to see his children taken to a school miles from his home. But as long as "neighborhood schools" in disadvantaged parts of our cities are second-rate schools, no concerned parent can in good conscience allow his child to study there, when there are first-rate schools elsewhere. Until we are willing to make the financial commitment necessary to guarantee each child the best possible education and to make the moral commitment necessary to provide equal access to education throughout the country, busing will be necessary. To make busing optional now is to bar equal educational opportunity for millions of disadvantaged children.

I have read in The American Legion Magazine for March the arguments in PRO & CON: Should School Busing Be Made Optional By Constitutional Amendment?

IN MY OPINION SCHOOL BUSING SHOULD BE SHOULD NOT BE MADE OPTIONAL BY CONSTITUTIONAL AMENDMENT.

SIGNED

ADDRESS

TOWN

STATE

You can address any Representative c/o U.S. House of Representatives, Washington, D.C. 20515; any Senator c/o U.S. Senate, Washington, D.C. 20510.

By H. ALLEN PERRY

THE AUTOMOBILE on our cover this month is a Mustang, and if you'll look hard you'll see that the engine under the hood by no means fills the space of a Mustang engine.

It is not a Mustang engine.

It is not a piston engine of any kind (nor even a turbine engine).

It is a "rotary engine," and the particular brand of rotary engine is a Wankel. That's pronounced "vankel" back home in Germany, though many Americans are pronouncing the "w" as in "wander."

The Wankel is a completely new kind of auto engine—and you will probably drive with one sooner or later.

No Mustang actually eomes with a Wankel engine, though nobody will bet that Ford will not, within a few years, be putting Wankel engines in American ears. Ford Motors has pledged such a big piece of eash in the Wankel overseas that it would be hard to believe otherwise.

General Motors will probably be offering Wankel engines in U.S. built cars before Ford does. It has 100 Wankel powered Chevrolet Vegas being tested on the streets and freeways of Detroit at present. As for the Wankel in the Mustang on our cover, it is just a test Wankel installed in a Mustang by Curtiss-Wright, Inc., which has basic American rights to Wankel engines.

The Wankel sort of eame upon us by surprise in the last few years. All along we had been talking of maybe going back to steam or to elcetric autos as a way around pollution and other problems that have grown up with the old, reliable piston engine. Then, up popped the Wankel, a new type of engine that -though old in theory-had never been developed for any practical mass use before. It had little advance publicity. The trade name Wankel and the family name "rotary engine" were still strange words to most of us when NSU in Germany and Toyo Kogyo in Japan went into actual mass production.

Today, while we are still in the stages of getting used to the fact that there is such a thing, Toyo Kogyo is producing 20,000 Wankel-powered Mazda autos a month, and shipping about 1,500 of them here where they are mostly being bought up by drivers in California and Oregon. Meanwhile, extremely reliable industry sources say that General Motors will offer the new engine as an option in either the 1973 or 1974 Vega, or in a smaller "eommuter" car to be ready by 1974. Ford, Chrysler and American Motors are also deeply involved in the rotary engine in one way or another, while in Europe Mereedes-Benz, Citroen, Renault and the British Leyland have it under intensive study.



ON THE WAY: A

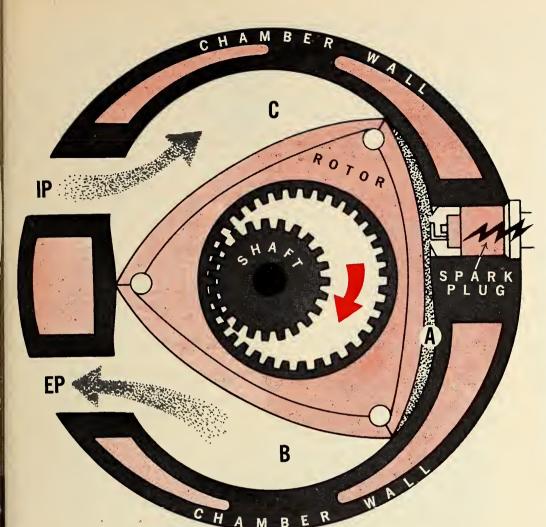
Meet the Wankel—a smaller, cheaper, smoother, peppy auto powerplant that's trying to tell the old, familiar piston engine to get lost.

Skipping what a Wankel is for the moment, this funny looking little machine with the funny name is highly attractive because, horsepower for horsepower, it's about a third as big as the conventional piston engine, half the weight and has about 40% fewer working parts. It is also 15% to 35% cheaper to make, a good deal easier to de-pollute, able to run on fuel well below the octane rating of "regular" gas without knocking, and gives a smoother and quieter performance than the best conventional engine you can buy.

It responds to acceleration so readily that it really needs a special transmission to dampen its jack rabbit tendencies in the hands of heavy-footed drivers.

Just when the Wankel came along. Detroit was looking at the fact that the legally-required anti-pollution and safety devices it is going to have to add to autos would jump their prices considerably. The Wankel may or may not give us a cheaper car, but it comes on the scene just in time to save on engine costs what is going to have to go into cleaning up the exhaust and adding safety.

In the new car market, the Wankel promises to hold back these looming price rises. And as it is a much smaller engine it even provides room to add



Cross section of sealed chamber of a basic Wankel engine. The nearly triangular thing is the rotor, which is driven by repeated explosions around the shaft, center. The gearing makes the shaft turn several times to one turn of the rotor.

several times to one turn of the rotor. In space "A," fuel and air mixture is compressed, due to odd shape of chamber and rotor. As spark plug ignites fuel in space "A," explosion will drive it to space "B." There it expands, and as it passes exhaust port (EP) it shrinks again (not shown) in the same manner as shown in position "A." This second compression drives burnt gases out of exhaust port.

At position "C" it enlarges again to suck in air and fuel mixture at fuel intake port (IP). Mixture is compressed as it arrives at position "A" again for next ignition.

All three combustion spaces operate in the same way in each revolution of rotor to provide three combustions per revolution, expanding and contracting in turn as needed for function of the moment. Actual shape of chamber is like two partly overlaid circles. This shaping gimmick—combined with rotor shape—provides expansion and contraction of combustion spaces at the proper moments. Tips of rotor are the apex seals.

Completely Different Auto Engine

some of the stuff that has to be put under the hood to control pollution. As an engine in use, it also promises the owner a cheaper power plant to maintain and repair. And while it isn't pollution-free, the Wankel specializes in the kind of fumes that are relatively easy to control, while emitting far less of the hard-tocontrol type.

The owners of Wankels will be in for a happy surprise not only in smooth performance, but at the repair shop. Some of the most expensive repair jobs will be gone forever. A lot of the old, familiar parts just aren't included in a Wankel, and some routine maintenance will be cheaper. But the Wankel has its own problems, as what doesn't?

Among engines we are used to, the Wankel is neither fish nor fowl. It is the half-breed offspring of two more familiar parents—the piston engine and the turbine engine. It isn't quite as much like either of its parents as a mule is like a horse or a jackass. (Turn page)



Japanese Wankel-powered Mazdas being loaded for shipment to U.S. West Coast, where about 1,500 of them are being bought each month.

CONTINUED On the Way: A Completely Different Auto Engine

All these years our popular cars have been driven by piston engines, while the engineers have known that a turbine engine (except for one unsolvable problem) would be better. The Wankel, without being a turbine, solves that problem.

It only takes a little explanation of engine design to show how the Wankel finally managed to merge some of the advantages of the turbine engine with some of the characteristics of the piston engine and come up with a successful half-breed.

1. The central problem in any auto engine is to find the best way—all around—to convert the energy of a burning fuel into the circular motion of a drive shaft.

2. You have two choices of power delivery—continuous burning of the fuel (turbine) or a series of explosions that strike a series of blows (until now, piston engine).

3. The most compact, efficient and simplest engine converts the power of the burning fuel *directly* into circular motion. The turbine engine has always done this very neatly and simply. The continuous hot jet of burning turbine fuel blows through a fan and spins it just like a windmill. For more than two decades our auto engineers have tried to come up with a turbine engine for mass produced automobiles, since it would have many advantages now advertised for the Wankel.

Just one main turbine problem went totally unsolved. *Heat*. The continuous flame of the turbine develops such heat that it can melt the cast-iron body of an ordinary auto engine. Thus, an auto turbine engine has to be made out of stainless steel or other expensive metals with high melting points.

Twenty years and more ago Ford was trying to find a cheap ceramic material that could combine the strength tests of metals with the heat resistance of ceramics, in order to put a turbine car within your price range.* Good try, no sale.

Most of our major auto makers have made perfectly good turbine engines for automobiles—at a car cost of maybe \$20,000 or so. But nobody ever got one down to the cost of the family car, though many airplanes—whose initial cost can run high—are operated by turbines these days.

4. The only practical alternative to turbines for autos has been the piston engine with crank shaft. In it, a series of explosions strikes repeated blows straight down on the ends of crank handles. At the other ends of the cranks the straight down motion produces circular motion in a shaft as any crank

converts straight motion into circular motion.

It is this crank arrangement that has made the piston engine so much more complex and squanderous of energy, parts, size and weight than the turbine. The fuel power is *not* converted directly into circular motion. An intervening arrangement with delicate timing and

N.Y. TIMES 11/30/71

Ford Is Licensed To Study the Use Of Wankel Engine DETROIT, Nov. 29 (UPI)-The Ford Motor Company, following the General Motors Corporation, has signed a license agreement to explore the development of the Wankel rotary engine, it was announced The agreement was signed by today. Ford Werke, A.G., a German subsidiary of the parent company, with Audi NSU Auto Union, A.G., of Neckarsulm, West Germany, a Volkswagen Wankel, and subsidiary, and Walker, G.m.b.H., of Lindau, Germany. It permits Ford to acquire technical information relative to the engine and also permits manufacture of the engine in West Germany.
Ford's president, Lee A. Iacocca, said that "the license will enable us to acquire the technical know-how to provide a basis for further evaluation of the rotary engine." He emphasized, however, that, although it gave Ford the right to manufacture the engine, the company had no manufacturing plans at present. Last year, G.M. signed a \$50million agreement with Wankel to manufacture and develop the rotary engine with a proviso that, if G.M. decided to build the engine for use in cars, it would require no further royalty payments to the patent Owner.

A Ford enobasman said that

1971 news announcement of Ford entry in the Wankel engine field.

many parts is needed, along with a loss in efficiency before the piston engine's explosions are converted into circular motion.

But the piston won out over the turbine in autos because the series of explosions in the cylinders was accompanied, of course, by a series of non-explosions. These little intervals permitted sufficient cooling so that a piston auto engine could be made of cheap cast iron without melting. Inside each cylinder of an auto piston engine an explosion occurs every second trip down of the piston. For every "explosion trip" the piston makes one up and down trip without an explosion, while it cleans house of burned fuel, refuels and compresses the new fuel and cools. This pause that cools has been the piston's thing.

5. But suppose you could make a series of explosions (with the desired intervening cooling periods) that would turn a shaft *directly* without any cranks? In other words, spin a fan the way a turbine does, but do it using the repeated blows of the piston engine instead of the continuous burning of the turbine with its heat.

That is the Wankel, or any "rotary engine."

If you have an old household electric fan around (not plugged in) you can turn it on its shaft just the way a Wankel does by repeatedly hitting one of the blades with your hand. If you can blow hard enough, you can turn it the way a turbine does by blowing on it. You can't turn it the way a piston engine does unless you add a lot of parts, including a crank—attached to a U-shaped bend on an addition to the fan's shaft—which you'll operate by repeatedly hitting the crank handle on one end when the timing is right.

So, in brief, the Wankel spins a "fan" by whacking with the piston's repeated blows, but in a circular direction without pistons. And it achieves a direct circular motion without the constant hot burning of the turbine.

Long ago, engineers pursued what has become the Wankel idea. Any number of such engines were designed years ago that worked after a fashion—though they all had bugs in them or financial problems that discouraged their development. No doubt many other rotary designs could serve as well, but Wankel beat them to the development of a marketable model.

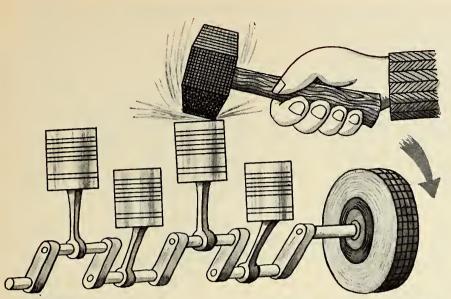
Wankels in American-made cars are most assuredly on the way.

One of the sources for this information is none other than Dr. David Cole, a professor of mechanical engineering in Michigan and son of GM's president. He may not speak for his father's firm, but he knows the Wankel. "I think Chevrolet will offer a Wankel as a luxury option in the Vega first, possibly by 1973," he says.

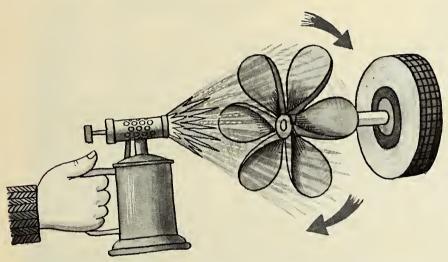
By 1975, Dr. Cole predicts that 10% of the cars made in the United States will be Wankel-powered. And, though he

ILLUSTRATIONS BY JAMEL FLORA

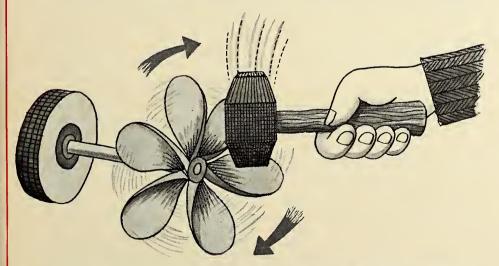
* See "They're Working on Your Jet Auto Now," American Legion Magazine, Feb., 1954.



THE PRINCIPLE OF THE PISTON ENGINE in present cars. A series of blows turns crank shaft, whose circular motion is transmitted to car's wheels in the end. These drawings ignore actual details to illustrate basic principles only.



THE PRINCIPLE OF THE TURBINE ENGINE whose heat made it too costly for popular cars. Constant flame spins fan to turn wheels without any crank shaft.



THE PRINCIPLE OF THE WANKEL (or "rotary combustion") ENGINE. A series of blows, as in piston engine, turns "fan" (or rotor) as in turbine engine. It gets rid of crank shaft complex of piston engine, while avoiding turbine's constant flame.

is just guesstimating, he thinks that by 1980 it will be 50%.

Meanwhile, suppliers say that GM has asked for bids on \$12 million worth of tooling to put the engine into pilot production in 1972. These suppliers say that GM intends to run off a sample batch of 1,200 Wankels this year.

GM is also said to be developing an automatic transmission to go with its Wankels, and considering complete automation for the production line which will make them. Some sources say GM is even thinking about junking separate divisional engine production lines and centralizing engine manufacture in one or two factories. The switch to Wankel engines would provide the perfect opportunity.

In addition to automobiles, Wankels are already being seen in snowmobiles, where their small size and weight make them attractive. Within the next 12-18 months, you'll also be able to buy Wankel-powered chain saws, outboard motors, lawn mowers, garden tractors, industrial pumps and compressors, and all-terrain vehicles.

The Wankel also has some obvious military uses—in trucks, tanks and other vehicles. But it has at least one not-so-obvious military application—in superquiet reconnaissance aircraft. One such plane, the experimental Q-Star, fitted with a muffled Wankel, has flown 100 feet over the heads of observers without being heard.

The Wankel engine is a patented device and rights to it are now held 60% by a subsidiary of Volkswagen and 40% by a British mining combine, Lonhro, Ltd., both of which purchased their shares from Dr. Felix Wankel. An agreement with Volkswagen gives Lonhro, for all practical purposes, control over the engine during licensing negotiations. In the United States, Curtiss-Wright, the old-line aeronautical firm that was the very first Wankel licensee, holds exclusive American licensing rights. This means that every car maker who wants to build Wankel engines has to negotiate a deal with Volkswagen and Lonhroand, in the United States, with Curtiss-Wright, too. The latter has done perhaps the major work in perfecting the Wankel.

Because the rights to it are so tightly held, the Wankel may upset the balance of power of American auto companies if it turns out to be as popular—and eventually as universal—as many think it will. The first U.S. companies in the act may get a tremendous advantage over latecomers, who will risk being frozen out unless they pay through the nose to get on board. Of course, they may pay through the nose, or they may get busy and come up with different rotary engines that are as good as—or better than—the Wankel. As you'll see, some U.S. companies have put very big

CONTINUED On the Way: A Completely Different Auto Engine

pieces of cash into Wankel rights, perhaps because of fear that they may be caught with their pants down if the Wankel turns out to make their old engines obsolete.

General Motors was the first American car maker to become a Wankel licensee. In November 1970, GM signed a contract calling for \$50 million in payments, spread over five years. It was a lump sum deal, with no royalty payments ever, and no restrictions as to which GM cars can use the engine. And GM can cancel anytime before the five years are up, paying no more. It did not bar other U.S. firms from making their own deals.

This agreement now seems unusually generous. Royalties might have added up to much more in time. But Wankel patent holders were desperate for the GM deal. It put the Wankel engine on the map, for however strong foreign interest in the engine was, the United States is the car-making center of the world. And GM makes 4.5 million engines each year.

Good as the GM agreement was, it wasn't the one for which GM was shooting. Originally, according to industry reports, GM tried to buy a 40% interest in the engine (the same slice Lonhro eventually acquired). This would have come close to giving GM worldwide control of the Wankel and could have turned the car business topsy-turvy.

Ford also has signed a license agreement for the Wankel. Negotiations were concluded late last November. Insiders say that Ford will pay \$13.7 million for Wankel rights, plus 3% to 5% of the factory price of each Ford Wankel engine, depending on volume. But there's a big catch. The contract was made between the Wankel patent holders and Ford's German subsidiary. Only that subsidiary will be allowed to make Ford Wankel engines and it can install them only in German-made Fords. The contract does permit these cars to be imported into the United States, however. Still, if Ford decides to make Wankelpowered cars in the United States, it will probably have to renegotiate the deal. And if GM proceeds as expected, Ford may be forced to do just that.

Chrysler, which worked with Curtiss-Wright on the Wankel in the early 1960's, was reportedly offered the same deal GM eventually accepted. But Chrysler thought it too expensive. It's a fair guess that Chrysler may someday rue that decision.

American Motors, so far as is known, is not actively negotiating with Lonhro for foreign manufacture or Curtiss-Wright for American manufacture. However, that firm has been working with the French auto maker, Renault,

on a different rotary engine known as the Renault-Rambler. If there's a 100% American rotary in the works—as there may well be—it is shrouded in silence.

Toyo Kogyo, maker of the Wankelpowered Mazda, has a license agreement with Lonhro which reportedly calls for a payment to the patent holders of \$14 for each engine it makes.

Worldwide, there are now 19 Wankel licensees, including Citroen, Mercedes. Audi, NSU, Porsche, Volkswagen, Toyo Kogyo, Curtiss-Wright, GM, Ford, British Leyland and several manufacturers who plan non-automotive uses for the engine.

Though GM and Ford are both licensees, neither has officially and publicly declared that we'll be driving

GERMAN INFORMATION CENTER

axies, etc., under its present agreement.
General Motors released the same sort

General Motors released the same sort of disclaimer of any immediate production plans when it signed its Wankel agreement. It said that it spent \$50 million to buy Wankel rights "to facilitate further intensive research-and-development studies of the Wankel rotary-combustion engine to determine whether it is suitable for General Motors automotive applications."

All of this sounds like the politician who denies he's running for office, while speechifying from coast-to-coast. Car companies don't spend \$50 million without expecting to get it back—and then some.

The Wankel is the product of the mind and workshop of Dr. Felix Wankel,



The first Wankel-powered motorcycle was a "sensation" at a 1971 Cologne fair.

Wankel-engined American-made cars soon, despite inside information to the contrary. They most certainly don't want to discourage people from buying today's piston-engined cars.

"Ford has no plans to manufacture the engine at this time," according to William R. Wilkenson, special projects executive, product planning staff. "The agreement... will assist Ford in keeping abreast of technical developments in the rotary engine field and in relation to the proposed financial tieup between Ford and Toyo Kogyo."

That last reference had to do with Ford's one-time intention to buy Wankel engines from Toyo Kogyo, a plan the patent holders scotched. Ford can buy the cars, all right—even buy into the firm. But it can't import just the Wankel engines and stick them in the company's Mavericks, Mustangs, Thunderbirds, Cal-

a German who developed it between 1954 and 1956.

Years earlier, many inventors had come up with stationary power plants that didn't have to pass their energy through the up-and-down motion of a piston. Experts think that many of these other rotaries—given sufficient development time and money—could be practical alternatives to the conventional piston engine in automobiles. But, so far. only the Wankel has gotten the cash needed for development.

There's been a lot of talk in recent times about steam engines or electric cars. But, so far, electric cars have proved impractical. Batteries good enough to make electric cars perform like today's gas cars just don't exist, even in laboratories. A practical steam engine may appear reasonably soon, but much technical development will be



Inventor Felix Wankel (right) with his Wankel-engine boat and mechanic.

LOCKHEED/CURTISS-WRIGHT



Lockheed QRC experimental reconnaissance plane, powered by Curtiss-Wright 185 hp rotary combustion engine (Wankel), was unheard on ground when flying at 100 ft.

needed—and then it isn't likely to offer the weight and cost advantages of the Wankel.

Most important, the car makers have given the green light to Wankel development. They've decided they can live with it (or that they must, like it or not). They also believe that of all the possible alternatives to the piston engine, the Wankel, or other rotary engines, will cause the fewest disruptions for the industry. Manufacture, sale, servicing, fueling and adjustments can go on pretty much as before. Wankel-powered cars will cost no more than piston-engine cars, even with anti-pollution plumbing and additional safety equipment—discounting inflation, that is.

If it weren't for the new anti-pollution and safety regulations, the car companies would have been willing to keep making piston engines almost forever. The industry has made them almost as perfect as they can be for the price, and the advent of the Wankel is nothing less than a revolution. It may not quite be the revolution car buyers hoped for, but it's likely to make almost everyone—manufacturers, safety advocates, environmentalists, the government and car owners—reasonably happy.

If most of us are driving Wankelpowered cars within a decade or so, as many experts expect, familiar words which describe some major parts of the piston engine are headed for the scrap heap.

Instead, by 1980 or so, drivers who only vaguely comprehend their first Wankel-powered cars will talk confidently about the rotor, the chamber, the apex seals, the intake and exhaust ports

—for these are the terms that name the major parts of the Wankel.

The basic Wankel engine is a "one-cylinder" unit. However, we'll stop calling it a cylinder and call it a "chamber." The shaft that makes the car's wheels turn runs straight through the "chamber." Instead of a piston, the thing we have called a "fan" is geared to the shaft and fills a cross section of the chamber, with three "fan blades" reaching to a tight seal around the not-exactly circular interior sides of the chamber. The "fan" is properly a "rotor," and that's what we'll call it henceforth.

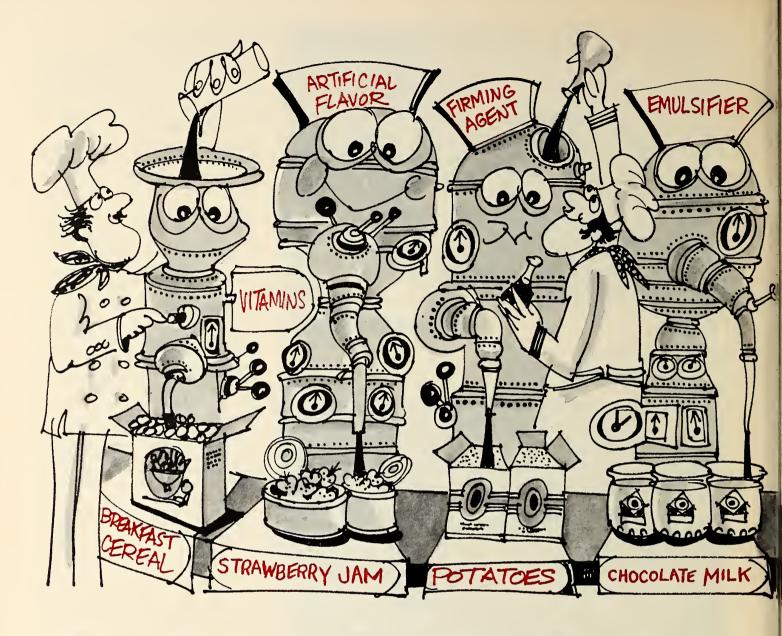
Between the "blades," naturally, are open spaces—three of them—and that's where the action is. As the rotor turns, these open spaces pass fixed parts of the chamber wall which have various features.

The drawing on page 19 shows how the size of these spaces grows and shrinks—even though the parts are rigid—as any one space follows its leading rotor "blade" around the inside of the chamber. The fuel-air mixture is highly compressed as it passes the spark plug. As it nears the exhaust port the space expands in size, then shrinks again to drive burnt fuel out the port. It expands again to suck a fresh fuel-air mixture in as it passes the intake port, and compresses again for the next ignition by the spark plug. And so on, driving the rotor round and round.

The unique shape of the chamber (something like two circles partly overlapping) combined with the shape of the rotor are the essential clever features of the Wankel. The mere mechanical design of rigid parts assures unchangeable operation of essential complex functions. In the piston engine, some of these functions are performed by special parts working independently that can get out of whack themselves or out of timing with the rest. In the Wankel, they are built into the nature of the total design—the ultimate in simplicity.

Though a Wankel engine unit is a "one-cylinder job" in the parlance of piston engines—having one chamber it is also a "three-cylinder job" by virtue of having three fuel-burning compartments between the "blades" in its single chamber. What this really shows is that the Wankel is so different that the old language of the piston engine doesn't really apply to it. You can make a more powerful Wankel by making it bigger, or you can put as many onechambered units as you please in one engine to increase the power you want to be delivered. Because the direct motion is circular, even though a series of explosions is used there's less vibration in a Wankel than in a piston engine, and none of the whine of a turbine.

By now, the reasons for some of the (Continued on page 42)



Why Chemicals in Our Food?

If people complain about them, why put them in at all?

By HARVEY ARDMAN

A BUNCH OF US were talking recently about the chemicals that are added to our packaged foods when one member of the group innocently asked: "Why do they add that stuff to our food at all when there are so many complaints about it?"

The silence in our group was deafen-

Not a member could recall hearing or reading why pyridoxine hydrochloride or cyanocobalamin might sneak into our lunch unasked.

One of us was the Editor. "Come, come," he said. "Certainly in all that has

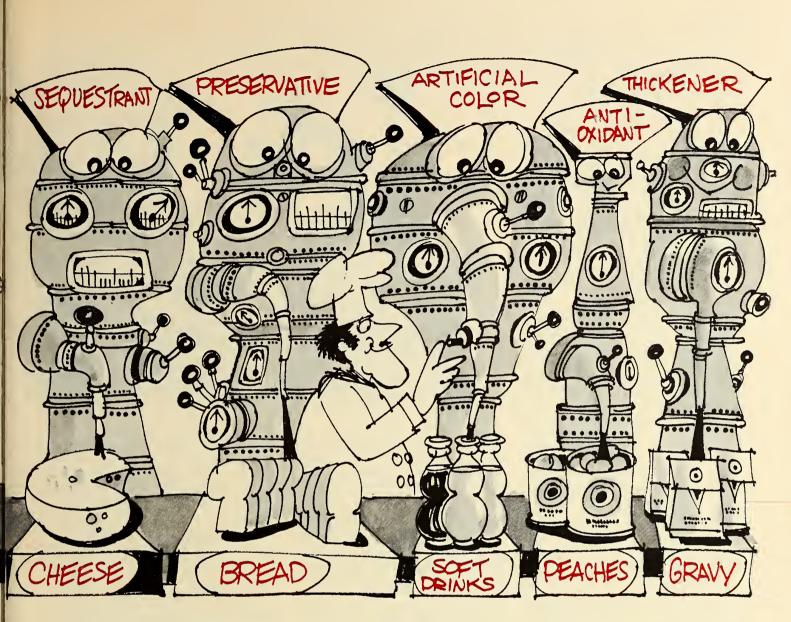
been written and broadcast about food additives, somebody here has heard or read about why they put all that stuff in our yummies in the first place."

When nobody could answer, the Editor said that this was then a Fit Subject for Illumination. He told me to get a likely food package, read what was in it, find out what it was and why it was there, and then "... follow through to tell the story of why the additives are in the food—for better or worse."

I went out and got me a package of Carnation's chocolate milk Slender. It's a popular diet mix intended to be added to milk to provide a sound meal with only 225 calories.



Without artificial flavors, good foods would taste bad.



The label showed 27 ingredients, most of them mysterious, some jawbreakers. They were:

Nonfat dry milk, sucrose, sodium caseinate, cocoa, dibasic calcium phosphate, lactose, magnesium hydroxide, lecithin, salt, artificial flavors, artificial color, sodium silico aluminate, ferric orthophosphate, sodium ascorbate, vitamin E acetate, vitamin A, niacinamide, calcium pantothenate, manganese sulfate, basic copper carbonate, cyanocobalamin, pyridoxine hydrochloride, thiamine mononitrate, folic acid, potassium iodide, vitamin D2 and riboflavin—in decreasing order of magnitude.

To anyone lacking a master's degree in chemistry, this sounds more like a random collection of laboratory chemicals than anything fit for human consumption. Yet Slender seems tasty and nourishing and is hardly unique. A similar list of godawful sounding chemicals can be found in any number of foods, from TV dinners to prepared pie shells, to non-dairy creamers, to soft drinks, to candies of all sorts, or to frozen desserts

-iust to name a small selection.

It almost seems surprising that despite all these chemicals the food looks good, smells good, tastes good and is completely fresh and energy giving.

But it isn't really surprising, for the fact is that probably 98% or so of the food additives are what is responsible for packaged food tasting good, smelling good, looking good, being nourishing, staying fresh and retaining its food value. Of Slender's 27 listed ingredients, 25 of them were put there to make it better food when packaged or to keep it good until I ate it. One was there for appearances' sake and the last of 27 was to improve the taste. The worst thing about most of them turned out to be their names rather than their substance or their effect. Let's identify the 27 additives listed for Slender.

Ten are vitamins, of which seven are simply hiding under other names.

Vitamin A is itself.

Vitamin D2 is itself.

Vitamin E acetate is a synthetic form of vitamin E.

Niacinamide is one of the B vitamins.

Calcium pantothenate is another B itamin

Cyanocobalamin is a synthetic form of vitamin B12.

Pyridoxine hydrocluloride is a synthetic form of vitamin B6.

Thiamine mononitrate is a synthetic form of vitamin B1.

Folic acid is another B vitamin.

Riboflavin is vitamin B2.

There's a bodily need for all of these, and the only thing frightening about them is the sinister sound of their names. And say what you want about "natural" foods, it's hard to come by the needed vitamins so neatly packaged in any of them.

Six of the substances in Slender are natural foods or fractions of them, of which three are hiding under unfamiliar names.

Nonfat dry milk is dehydrated milk powder minus the fat.

Cocoa is a recognized natural food substance.

(Continued on next page)

Chemicals In Our Food

Salt (sodium chloride) is a household staple on the spice shelf.

Sucrose is common table sugar.

Sodium caseinate is a milk protein.

Lactose is milk sugar.

Two of the Slender additives provide minerals needed by the body that aren't easily come by in unsupplemented diets.

Ferric orthophosphate is an iron sup-

Manganese sulfate is another nutritive mineral supplement.

We've now covered 18 of the 27 additives and every one of them adds to the food value of Slender.

Potassium iodide provides iodine for goiter prevention, thus qualifies scientifically as a "health food.'

Four of the additives maintain the physical condition of Slender, to keep the ingredients from separating and caking.

Lecithin is an emulsifier, the one substance in Slender that keeps the contents uniformly mixed instead of separating.

Dibasic calcium phosphate is an anticaking agent.

Magnesium hydroxide is another anticaking agent.

Sodium silico aluminate is another anti-caking agent.

Two of the substances prevent Slender from spoiling en route to your grocer, on your grocer's shelves, or on your own shelves.

Sodium ascorbate is a preservative which prevents spoilage in general.

Basic copper carbonate is specifically an anti-mold preservative.

At this point we've covered 25 of the 27 substances listed on the Slender package and every one of them either adds to its food value, prevents disease or keeps Slender in mint condition until you open the package and use it.

Artificial flavors assure the taste of each flavor of Slender.

A single substance remains to be accounted for, and it is a vanity item, if

Artificial color is what it says and it is man-made from coal tar dyes.

Probably if the ultimate eater would welcome good foods even if they had sickly colors, the manufacturers would be glad to leave artificial coloring out. But people like appetizing colors, so this one item-which really does nothing except for the eye of the eater-is tossed in, too. I will say that when I found what these things were I breathed easier.

It isn't my purpose to advertise Slender. But as it is entirely a concocted food it offers in one package a liberal education on 27 food additives. For all I know, perhaps even more should be added if Slender is to serve regularly as a complete meal when added to milk, as advertised.

If you think I'm joking, a bunch of nutrition scientists at the University of Texas are unhappy with "enriched" bread and cereals because in their view they aren't enriched enough.



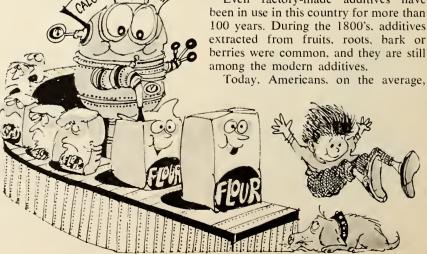
Emulsifiers keep ingredients, such as oil and peanut butter, from separating,

rats on diets of nothing but this and nothing but that, then seeing how they thrive and grow. Even milk, because of its iron and copper shortages, failed in the end as a lusty one-food diet for little rats. "Enriched" breads and cereals failed miserably as diets unto themselves. When bread is "enriched" it usually has thiamine, riboflavin, niacin (all vitamins) and iron added to it. According to a recent note in the Scientific American, one of the Texas scientists (Roger J. Williams) thinks the enrichment would be far better for humans if the following substances were added to bread:

Pyridoxine, pantothenate, cobalamine, vitamin A. vitamin E. folic acid, L-lysine, calcium, phosphate, magnesium oxide, manganese sulfate and copper sulfate. The baby rats throve on such enrichment, and apparently Williams' view is that the world's poor people who can't get varied diets would be far better off nutritionally if their bread had the U, of Texas team's brand of enrichment which is more additives, not less.

Actually, men have been adding substances to their food almost as long as they've been eating. Primitive men used wood smoke (what's its chemical name?) to preserve meat, and fishermen have been adding salt to their catches for centuries. You might even say that America was discovered because of food additives. Columbus got here by accident while seeking a faster way to get to India in order to lower the price of spices to add to food. I'll bet the chemical name of pepper is another jawbreaker.

Even factory-made additives have been in use in this country for more than 100 years. During the 1800's, additives extracted from fruits, roots, bark or berries were common, and they are still



Anti-caking agents keep moisture in foods that would be awful if dry.



Vitamins, minerals are added to flour to replace those lost in the milling process.

eat about three pounds of food additives each year out of a total of about 1,400 pounds of food. Their bulk is nothing compared to their variety. Now and then, of course, there is good reason to rule out some particular additives, though there are those who go so far as to say they don't want to be fed any "chemicals." Of course, everything we eat and drink is made of chemicals. Water, if pure, is pure hydrogen oxide. Even the so-called "natural foods" and all the "health foods" are just collections of chemical compounds. So are we. As every high school student hears at one time or another, we're little more than a few gailons of water and 98¢ worth of other chemicals, artfully put together.

All of which makes it seem a little silly to object to the very idea of additives, as a fair number of people apparently do. Two common food additives virtually erased two widely prevalent dis-

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The addition of vitamin D to milk virtually eliminated rickets.

eases. The first of these to appear in our foods was iodine, which was added to table salt in 1924. With this addition, the incidence of goiter, a disease of the thyroid gland, dropped considerably in this country.

And, in the 1930's, vitamin D began to be routinely added to milk. As a result, rickets is now mighty rare here.

In the 1940's, flour was enriched with iron, calcium and B vitamins, while margarine was fortified with vitamin A. This caused a significant decline in infant mortality.

Most of the other additives that regularly appear either give us better food than we ever had before (all those vitamins and minerals) or make it possible now that most of us are off the farmto get a decent supply of food at all in a supermarket society where the eater gets his food long after it has been packaged. Most of us have forgotten what a problem food spoilage used to be. Additives and mechanical refrigeration have let us forget. Our ability to buy wholly or partially prepared foods has freed housewives from enormous kitchen drudgery, and additives helped make it so. Additives have held food prices from skyrocketing, including the price of that great staple, bread, whose basic flour would cost far more without additives.

Chemical additives maintain coconut's moisture. They keep bread soft and mold-free. They stop oil from surfacing in peanut butter, keep chocolate milk from separating into chocolate and milk. They make shortenings cream easily, and flour bake better. They reduce ice crystal formation in ice cream. They extend the

storage life of all kinds of prepared and packaged foods.

Dr. Bernard L. Oser, a member of the Food Protection Committee of the National Academy of Sciences, says, "Were it not for food additives, baked goods would go stale or mold overnight, salad oils and dressings would separate and turn rancid, table salt would turn hard and lumpy, canned fruits and vegetables would become discolored or mushy, vitamin potencies would deteriorate, beverages and frozen desserts would lack flavor and wrappings would stick to their contents,"

Just one use alone makes additives vital-preservation. Preservatives in foods allow them to stand on grocers' shelves for weeks without losing their nutritive value, spoiling, turning stale or rancid. They permit foods to be manufactured all across the nation, then shipped by truck or train to various population centers. There, they can be held in inventory, in wholesale distribution centers or retail warehouses, until needed. Without preservatives, foods plentiful in some areas of the country would be only the delicacies for the rich in other areas. There could be shortages of some foods in certain locales, while other places feasted. Even if supermarkets could arrange to have everything shipped in fresh, they simply couldn't afford to stock anything like the present variety of foodstuffs they offer, because spoilage on their shelves would cause huge losses.

Food additives are a major reason that Americans can choose from a bewildering variety of foods without having to worry—except on the rarest occasions—about the presence of disease-causing organisms. It is not a bit of hooey to say that they're largely responsible for the fact that the American diet is more nutritious than the diet of any other country at any other time in history.

But anyone would admit that the labeling on the packages hardly tells us what the additives are or do. Fortunately, we can break down most additives into 16 classifications, and if you read the breakdown you can probably interpret the labels at least better than you could before

1. Antioxidants. These preserve food freshness and prevent rancidity and rot. Some of the major antioxidants used are BHA (butylated hydroxyanisole) and BHT (butylated hydroxytoluene) and propyl gallate.

2. Emulsifiers. These agents create smooth, fluffy textures and keep ingredients from separating. The main ones are monoglycerides and diglycerides (which are similar to ordinary fat), the polycompounds (polyxyetheylene 20, polysorbate 60, polysorbate 80, sorbitan monostearate and lecithin).

3. Leavening agents. These substances

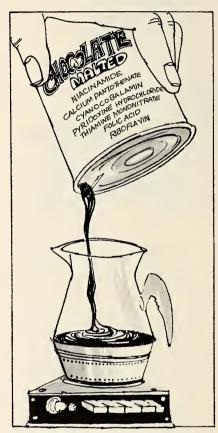
Chemicals In Our Food

release carbon dioxide and make baked goods fluffy. The major ones are monocalcium phosphate, dicalcium phosphate, sodium aluminum phosphate, cream of tartar and sodium aluminum sulfate.

- 4. Preservatives. In breads and cakes, these include calcium propionate, sodium propionate, sodium diacetate. In fruits, fruit juices and dried fruits, they include sodium benzoate, benzoic acid, sulphur, ethyl and methyl formate, ethylene oxide, prophylene oxide, sodium chloride, sodium sulfite. In milk and cheese, the main preservative is hydrogen peroxide. Ascorbic acid, ascorbate and citric acid are also used.
- 5. Sequestrants. These compounds tie up trace metals like iron and copper, thereby preventing or delaying spoilage. They also keep flavors and textures from deteriorating in cheese, margarine, canned beans, frozen peaches, salad dressing and cooked clams, among others. The chief chemicals in this group are sodium hexametaphosphate, sodium tripolyphosphate and EDTA.
- 6. Thickeners. This class of additives is used to thicken gravies, icings, syrups, pie fillings, salad dressings, cottage cheese and evaporated milk, to name the most prominent examples. It includes such substances as gum arabic, agar-agar, sodium carboxymethylcellulose, gclatin, carrageenan, carob bean gum, mcthyl cellulose, isopropyl citrate and pectin.
- 7. Firming agents. These compounds prevent canned potatoes, tomatoes, sliced apples, etc., from becoming mushy. They include mono and dicalcium phosphate, calcium citrate and calcium chloride.
- 8. Anti-caking agents. These prevent salt, baking powder, malted milk powders, non-dairy coffee creams, garlic salts, etc., from turning soggy and becoming unusable. They include calcium silicate, magnesium silicate, tricalcium phosphate, sodium aluminosilicate and silica gel.
- 9. Moisture-retaining agents. Unlike the anti-caking agents, these substances keep the moisture in foods that should be moist. In coconut and candies, sorbitol is used for this purpose. Marshmallows use glycerol.
- 10. Maturing and bleaching agents. Fresh-milled flour is rather yellow and bakes badly. If aged for several months, it matures, turning white and changing in a way that permits more even baking. But natural aging is costly and provides a perfect opportunity for insect or rodent infestation. And results aren't uniform. So, today, millers use chemicals—potassium bromate, chlorine and othersto accomplish this in a few seconds, with no effect on nutritive value and no chemical residue of any significance.
 - 11. Vitamins and minerals. White

flour and bread are usually enriched with vitamin B and iron to replace nutrients lost in the milling process. Vitamin A is usually added to margarine. And many vitamins and minerals are added to breakfast cereals, so kids or adults on the go can get what they need for the day during breakfast. They are added solely to increase the eater's benefit.

12. Artificial colors. Currently, there are approximately 34 FDA-approved color additives, most of them made from coal tar dyes and none of the approved



Seven additives, as above, are nothing. Some bread has as many as 93 of them, each serving a useful purpose.

ones are considered harmful. Jams and jellies, ice cream, cheese, maraschino cherries and a host of other foods are artificially colored, given the expected hue and tone, made to look appetizing. Some foods have their color boosted "naturally." One example: carotene, the orange-yellow compound naturally found in carrots is added to margarine to make it yellow.

- 13. Color fixatives. While they don't add any color themselves, these substances keep natural foods looking the way they should. It's not that they hide color deterioration, but that they prevent it. They keep meats red, prevent poultry and fruits from turning brown. Among the major color fixatives: sodium nitrite, ethoxyquin and several sulphur compounds.
- 14. Artificial flavors. This is the largest single group of food additives, num-

bering more than 1,600 substances. They're used when natural flavors are in short supply, or seasonable; or to easily and cheaply create flavor combinations that would be difficult to make from natural flavors.

To produce artificial flavors, scientists analyzed the natural ones. They found that each might be composed of dozens of compounds. For example, there arc about 80 different compounds in the natural strawberry flavor. Artificial strawberry flavoring has perhaps a quarter of these. Some commonly used flavoring substances are isoamyl acetate (used in raspberry, strawberry and caramel). benzaldehyde (a constituent of coconut, peach and almond flavors) and ethyl acetate (part of strawberry, banana and apple).

15. Flavor enhancers. While not adding any flavor of their own, these bring out a food's natural flavor. They include MSG (monosodium glutamate), maltol, 5-nucleotides, hydrolyzed plant protein and others.

16. Acidulants. Another additive in the flavor category, acidulants add tartness to carbonated drinks, candies, fruit juices, jams, gelatin desserts, etc. They include citric acid (fermented sugar), lactic acid (a product of sour milk and whey), phosphoric acid, fumaric acid, adipic acid, malic acid, tartaric acid and succinic acid.

It's certain that a lot of our uneasiness about food additives in general can be traced to their unfamiliar chemical names-simply a matter of language. We have proved this in our total attitudes toward adding things to food.

We have made virtual gods of some chefs who concocted additives using the language of the French kitchen—nearly always only for flavor and appearance. Yet we often abhor additives expressed in the language of industry whose purpose is to feed us well, plentifully and easily. One suspects that if we were to change the name of the flavorer isoamyl acetate to piquant, we'd flock to it. Wc might also seek out the preservative prophylene oxide if we were to call it toujours (French for "always"). Of course, our ad boys have tried to play it that way, only to be partially undone by our labeling laws. Lord knows what would happen to a French chef if he had to list his chemical ingredients on the menu.

Of all the additives listed above, none are considered harmful to most humans in normal use, and only a few are under a shadow of suspicion of likely harmful misuse. There is no avoiding some harm to some people from either natural or artificial foods, on account of allergies and other individual problems.

With no record of human damage, the coal tar coloring dyes are under

(Continued on page 46)

VETERANS

NEWSLETTER

A DIGEST OF EVENTS WHICH
ARE OF PERSONAL INTEREST TO YOU

MARCH 1972

LEGION PRESSES CAMPAIGN TO INCREASE BENEFITS IN VETERANS EDUCATION & TRAINING PROGRAMS:

The Legion is continuing to press its campaign for legislation to provide tuition and subsistence benefits to veterans taking educational training under VA programs... Presently, subsistence payments range from \$175 per month for single vets up to \$230 per month for married vets

with two dependents.

A whole host of collegiate veterans organizations representing thousands of vets in school, various organizations of educators, guidance counselors, financial aid personnel, and college and trade school associations are backing the Legion's mandated position (1971 National Convention)... In the main, this calls for (1) payment directly to the educational institution of 75% of the tuition, books and other fees up to a maximum of \$1,000 per year (2) a guaranteed and/or direct VA loan program for educational assistance and training (3) extension of maximum eligibility to 48 months.

As <u>Veterans</u> <u>Newsletter</u> went to press, a House Veterans Affairs Subcommittee on Education and Training is reported to have approved a 14% increase in subsistence payments to the present program and recommended adoption by the full Committee ... The Senate Veterans Affairs Education Subcommittee was also readying bills on the same subject... But the House bill doesn't get to the heart of the problem-namely that many of today's veterans cannot go to school at all under available educational programs simply because they can't afford to ... Among other things, they must eat, clothe themselves, travel to and from school, buy books and pay laboratory and other fees... It's well-nigh impossible in today's economy with the cost of everything rising despite efforts to keep the lid on, unless they have other resources.

Sometimes it helps to look backward in order to see ahead... In a 1968 report, the federal government's own Office of Education, Dep't of Health, Education and Welfare, stated that "the estimated average basic student charges (tuition, required fees, board and room) by publicly controlled institutions of higher education, in 1966-67 dollars, increased from \$874 in 1956-57 to \$1,034 in 1966-67. The charges are expected to reach \$1,211 by 1976-77. The estimated average basic student charges by non-publicly controlled institutions of higher education were \$1,486 in 1956-57, \$2,125 in 1966-67 and are expected to reach \$2,748 in 1976-77."

In actuality, the figures for 1976-77 were drastically underestimated ... They've already been exceeded, mainly because of the thrust supplied by an inflationary economy. ... A U.S. News & World Report article in February 1971 came a lot closer when it estimated the same items to average \$1,417 in public colleges in 1971 and \$1,492 in 1972; and then estimated the private college cost at \$3,089 in 1971 and \$3,281 in 1972... Add the cost of clothing, books, transportation and necessary incidentals, and the picture gets worse... Using 1970-71-72 as a rough index, it would not be unfair to estimate a 10% increase per year in higher education costs when planning for the future.

The picture is slightly better at technical and vocational schools—but only because programs at those institutions generally average less than two years and thus tax the vet's finances for a shorter period of time.

How does the veteran survive in college today?... He works—if he can find a part-time job... He borrows—if he can... His parents help—if they can... His wife works—if he is married and she can... He scrounges for a grant or a fellowship of some kind—if any are available... Sometimes he must use a combination of all of those means—if he's resourceful and knowledgeable enough.

The essential point is this: Something like 59% of Vietnam vets don't go to college or take technical training at all, chiefly, they say, because they <u>can't</u> <u>afford</u> <u>it!</u>

Further, 53% of the group which did not apply for educational and training benefits said they certainly would apply if benefits were increased and another 30% said they possibly would apply. (These figures were taken from the recent research poll conducted for

VETERANS NEWSLETTER

the VA by Louis Harris & Associates, Inc.... Focus of the research was the problems Vietnam era veterans face in readjusting to civilian life after their separation from the armed forces.)

Some may take advantage of low-cost government-backed educational loans that are available now to students if a bank in the area has funds to lend... But here the family's adjusted income is counted into the pot and this often creates an unnaturally high-seeming income level. thus effectively shutting out many deserving vets from the loans ... The Legion is pushing to have family income discounted from such consideration... The Legion is also calling for direct and/or guaranteed loans to the student-veteran... Thus, if he can't get current money to pay for his education, he at least will have the option to borrow against his future and finance it at the lowest possible dollar cost.

By now it should not need to be said that the nation has an obligation to provide educational opportunities to all veterans whose careers were interrupted by military service so that they can reach the vocational and educational status they might have had if they had not served their nation... In a world that has increased its body of technical knowledge more in the years since WW2 than in all the years before that conflict, it is vital that students go beyond the secondary school level to get higher training.. A technology that has produced computers, supersonic aircraft, laser beams, satellites and rockets to the moon and beyond, television, cathode ray tube writing, optical scanning devices, heart and organ transplants, and an array of other fantastic developments cannot function properly with human beings whose educational and training attainments stopped at or below the high school level... The nation must have people who can realize their full potential.

With unemployment for Vietnam era veterans running above 8%, the nation should take all steps necessary to make it possible for these young people to get education and training... At the very least, this would take them off the job market for a period of time... Then they can leapfrog back into the nation's work force at a higher level with increased skills and knowledge.

Write your Senator or Congressman, and the Senate and/or House Veterans Affairs Committee in Washington,

D.C... Let them know you favor legislation to provide financial help with tuition, fees, books and loans for today's G.I.'s so they'll have a better chance to get an education that will enable them to become more productive citizens.

OVER FOUR MILLION USGLI & NSLI POLICYHOLDERS TO GET RECORD INSURANCE DIVIDEND IN 1972:

Some 4.1 million veterans—3.9 million holders of WW2 NSLI policies. and 155,000 holders of WWI USGLI policies—will collect a record \$286 million in dividends on their insurance policies in the first six months of 1972, reports the VA... Dividend payments are normally made on the anniversary dates of indi-vidual policies but will be accelerated this year ... The VA says NSLI policy dividends will average \$68 per policy and USGLI policies will average \$135 per policy.. This is the fifth consecutive year NSLI dividends have been increased and the USGLI dividend is the largest regular dividend since 1953... No need to contact the VA since dividends will be paid automatically.

NEW LAWS ALLOW USE OF INSURANCE DIVIDENDS TO PURCHASE ADDITIONAL PAID-UP NSLI AND CONVERSION TO MODIFIED LIFE PLAN AT AGE 70:

As a result of new legislation (PL92-188) signed in the closing days of 1971, 3.9 million veterans with "V" prefixed WW2 National Service Life Insurance policies will be eligible to purchase additional paid-up insurance with their dividends commencing this coming July... No need to contact the VA... Policyholders will be mailed information and asked if they wish to participate in the program.

The other new law (PL92-193)now makes it possible (and financially feasible) for older veterans with term policies to convert to a Modified Life Plan at age 70... Here, premiums will remain at a level amount but insurance face value will be reduced by 50%... Previous modified life plans had a face value reduction of 50% on the insured's 65th birthday... Conversion to a modified plan is desirable because premiums remain level whereas term policy premiums go up periodically... Again, no need to contact the VA... Notification on this new plan goes out to policyholders beginning in June.

NEWS AMERICAN LEGION

AND VETERANS AFFAIRS

MARCH, 1972 -

1972 Membership Running Ahead of 1971: Strong Effort Still Needed

The American Legion's 1972 membership year is off to a good running start with 55 of its 58 departments having more membership than the same date a year ago. As of Jan. 20, national enrollments tallied 2,224,900—an increase of 176,296 over the corresponding date one year carlier—and 300.806 more than the Dec. 31 target of 1,924,094.

In the big cnrollment departments, Pennsylvania was running 18,399 ahcad followed by New York with 17,322 and Illinois with 14,554.

Three departments—North Dakota, South Dakota and Panama—went beyond their assigned national goals

and the Canal Zone Legionnaires came within 20 enrollments of bettering their 1971 membership.

The following seven departments were within 10% of their final 1971 membership: Ark., La., N.D., Ohio, Panama, S. Dak., and Wis.

An additional 15 departments—Ala., Cal., Colo., Ind., Iowa, Kans., Minn., Mo., Neb., Nev., N.J., Okla., R.I., S.C. and Tenn.—were above the national average of 82% of membership for 1972 as compared to 1971.

Naturally, much of the early upsurge was attributed to the rush to gct dues in before the \$.50 increase became effective Jan. 15. And while Nat'l Hq membership workers agreed the early figures were healthy indicators of the Legion's condition, they cautioned that a continuing strong effort would be needed in the early months of 1972 merely to keep momentum going and that an even stronger effort would be needed if the Legion wanted to exceed its 1971 enrollments.

Upcoming target dates are March 31 with 2,456,000, May 1 with 2,546,000 and July 18 with 2,655,000.

(See the colored tint block on page 34 for how your department finished the 1971 membership year.)

Vietnam Vet Unemployment Rate Still High

Half a million more Viet vets had jobs in 1971 over 1970 but jobless rate remains up due to enlarged veteran work force; Vietnam War wind-down will boost unemployment rate unless the economy can expand.

The Bureau of Labor Statistics of the U.S. Dep't of Labor reports that: "During 1971, some 900,000 men of all ages were discharged from the armed forces, and at year end the number of Vietnam Era veterans in the civilian population totaled 5.6 million. Approximately 80% of these men were in their 20's, and their relative youth and lack of recent labor force experience made job finding a difficult task.

"An average of 3.7 million veterans 20-29 years old were in the labor force in 1971, 500,000 more than a year earlier. Employment averaged 3.3 million and unemployment 325,000. Although the number of employed veter-

ans was 400,000 greater than in 1970, the increase was not enough to offset the gain in their labor force, and both the level and rate of unemployment rose over the year.

"The unemployment rate for veterans in ages 20-29 averaged 8.8% in 1971, compared with 6.9% in 1970. Among the veterans in ages 20-24, the rate averaged 12.2% and in ages 25-29, 5.7%—both up about 1/3 over the year. By the fourth quarter of 1971, however, the veterans' unemployment rate began to show improvement; their rate at year end was the same as in fourth quarter 1970, in contrast to substantially higher rates in earlier quarters of 1971 compared

with those in 1970."

What all the foregoing boils down to is this: The veteran, particularly the young, the uneducated, and, most particularly, the black, is still having a hard time finding employment. Though the economy expanded to the point where it provided jobs for nearly a half-million more Viet vets, it was not enough. There were just that many more veterans still looking for work.

With troop needs dropping as the war level in Southeast Asia recedes, many more ex-servicemen will be home looking for work. Unless the economy expands at an extremely rapid pace to accommodate them, the unemployment rate is bound to go up even higher.

The Legion, along with other veterans organizations, business, industry and government agencies, continues to try to find jobs for veterans or channel them into training and education opportunities.

Here are reports on some of the latest efforts: (Continued on next page)





Over 1,500 vets packed Gulfport, Miss., Legion Post 119 on Dec. 8 for a Veterans Assistance Day spearheaded by the VA.

NEWS

Laying the Cornerstone



In December, Nat'l Cmdr John Geiger made an official visit to the Virgin Islands, the first time any Nat'l Cmdr had done so. While there he helped lay the cornerstone for the new home of Alexander Hamilton Post 85, St. Croix, originally chartered in 1942, and now with 125 members.

- In January, President Nixon issued Executive Order 11598 which called for the Secretary of Labor to issue rules and regulations requiring each department and agency of the Executive Branch of the Federal Government to list certain suitable employment openings with the appropriate office of the State Employment Service or the U.S. Employment Service. Within limitations the order also applied to government contractors and subcontractors. The Legion has long called for such an action, most recently by mandate at the 1970 National Convention.
- The City of Philadelphia issued a report detailing what various city, state and federal agencies had accomplished in its area in 1971. It noted that the Philadelphia office of the Pennsylvania State Employment Service had placed 4,995 veterans into employment, of whom 3,569 were Vietnam vets. The Service also reported 75 veterans taking institutional skill training. The Philadelphia office of the VA reported the following on-the-job training statistics: 330 Viet vets in the Philadelphia police department, 303 with the Philadelphia Electric Co., 165 at the Naval Shipyard and 211 with the local Bell Telephone Co. Veterans placed in apprenticeship training programs with various construction trade unions in 1971 include 113 in the Carpenters & Joiners Union; 68 in the Sheet Metal Workers Union and 62 in the Steamfitters Union. Philadelphia's Public Employment Program, using fedcral funds under the Emergency Employment Act of 1971, hired 929 persons of which 741 were veterans, 405 of them Vietnam vets. The U.S. Civil Service Commission in the Philadelphia area hired 800 returning veterans in 1971 and expects to hire 1,000 more per year in the future.
- In Mississippi, a Veterans Assistance Day was held at Joe Graham Post

Legion Honored 62 Employers During 1971 For Hiring Handicapped and Older Workers

During 1971 American Legion citations for good employment practices were awarded to 62 employers around the nation with 29 firms honored for practices in hiring the handicapped and 33 for hiring older workers.

The national awards are made on a calendar year basis following the recommendation of the department organization of the Legion which nominates employers each year for the National-Hiring-The-Handicapped award and the

National Older Worker Citation. Awards are made by the Legion's National Economic Commission.

Handicapped awards are usually made in connection with the annual Employ the Handicapped Week and represent part of the Legion's participation in the programs of the President's Committee on Employment of the Handicapped. Older workers awards are usually made in conjunction with the Legion's Hire the Older Worker Week.

State	Handicapped Award	Older Worker Award
ALABAMA	None	Spring Valley Farms, Gadsden
ALASKA	None	Alaska Glacier Seafoods, Inc., Petersburg
ARIZONA	None	None
ARKANSAS	None	Superwood of Arkansas, N. Little Rock
CALIFORNIA	Chula Vista Sanitary Svce., Inc., & Sani-Tainer Inc., Chula Vista	None
COLORADO	Air Force Accounting & Finance Center, Air Reserve Personnel Center, Denver	None
CONNECTICUT	None	None
DELAWARE	Chrysler Corp. Newark Assembly Plant, Newark	None
D.C.	None	None
FLORIDA	None	None
GEORGIA	None	None
HAWAII	Miyano's Color TV & Appliance Center, Honolulu	Moses Akiona, Ltd., Honolulu
IDAHO	St. Luke's Hospital, Boise	Lamb-Weston, Inc. American Falls
ILLINOIS	McLean Trucking Co., Peoria	Illinois State Prison Complex, Joliet
INDIANA	Bootz Mfg Co., Inc. Evansville	None
IOWA	Link-Belt Speeder Div., FMC Corp., Cedar Rapids	Dooley Mfg. Co., Oskaloosa
KANSAS	None	Ray Christian Jewelers, Lawrence
KENTUCKY	None	Carolina Tire Co., Winchester
LOUISIANA	Webster Parish Sheriff's Office, Minden	Andrew's Rexall Drugs, Baton Rouge
MAINE	Aerofab, Inc., Sanford	None
MARYLAND	None	None
MASSACHUSETTS	None	None
MICHIGAN	Bennett Pump Co., Div. of John Wood Co., Muskegon Heights	Swanson Mfg. Co., Owosso

State	Handicapped Award	Older Worker Award
MINNESOTA	None	American Crystal Sugar Co., Crookston
MISSISSIPPI	None	East Side Planing Mill, Corinth
MISSOURI	None	None
MONTANA	Kober Construction Co., Billings	Montana Tuberculosis Ass'n, Helena
NEBRASKA	Calandra Camera Co., Omaha	Northrup-Jones, Omaha
NEVADA	None	None
NEW HAMPSHIRE	Waumbec Mills, Inc., Manchester	Leighton Machine Co., Manchester
NEW JERSEY	None	None
NEW MEXICO	Burn Construction Co., Inc., Las Cruces	Waukesha-Pearce Industries, Inc., Hobbs
NEW YORK	Sheltered Workshop for the Disabled, Inc., Binghamton	St. Joseph's Hospital, Elmira
NORTH CAROLINA	Highland Cotton Mill, Inc., High Point	Bernard Conrad Co., Weaverville
NORTH DAKOTA	None	Kirschmann Mfg. Co., Bismarck
ОНІО	The Lubrizol Corp., Cleveland	Pinkerton's Security Service, Columbus
OKLAHOMA	Tinker A. F. Base, Oklahoma City	Auto Crane Co., Tulsa
OREGON	Metal Processing Co. Portland	Flowers, Tommy Luke, Inc., Portland
PENNSYLVANIA	Extrudo Film Corp., Pottsville	DMH Co., Div. of Nat'l Gypsum Co., Schuylkill Haven
PHILIPPINES	None	Radio Communication of the Philippines, Inc., Manila
RHODE ISLAND	Anson Inc., Providence	None
SOUTH CAROLINA	None	None
SOUTH DAKOTA	None	Argus Leader, Sioux Falls
TENNESSEE	Brock Candy Co., Chattanooga	Cosco Business Furniture, Inc., Gallatin
TEXAS	 Winn's Stores, Inc., San Antonio George Young Toyota, Inc., Corpus Christi 	1. Intercontinental Mfg. Co., Inc., Garland 2. Guynes Printing Co., El Paso
UTAH	None	Ajax Presses, Salt Lake City
VERMONT	None	None
VIRGINIA	Pinkerton Detective Agency, Fiber Div. Area, Hopewell	C.P.C. Intl., Inc., Best Foods Div. of Corn Products Co., Portsmouth
WASHINGTON	None	American Building Maintenance Co., Seattle
WEST VIRGINIA	Consolidation Coal Co., Blacksville Mines #1 & 2, Blacksville	None
WISCONSIN	Blum Bros. Box Co., Marshfield Charmglow Products, Inc., Bristol	Northern Glove & Mitten Co., Green Bay
WYOMING	None	None

119, Gulfport on Dec. 8 (see photos page 31). The effort, spearheaded mainly by the VA, brought in over 1,500 veterans seeking jobs and VA and other benefits. Over 3,500 interviews were conducted and 330 vets placed in jobs which employers had listed with the state employment service in response to letters. An additional 200 were expected to be placed following the initial contact. The post parking lot was swiftly overcrowded at 9:00 a.m., and stayed that way until 7:00 p.m., forcing many to park blocks away. Joe Graham Post dispensed over 3,000 sandwiches and a like amount of coffee and soft drinks to the veterans and workers. Incidentally, Joe Graham Post (1.002 members. 1971) was destroyed by Hurricane Camille and was assisted in reconstruction by funds from the Legion's Hurricane Relief Fund.

- In New York, a Veterans Assistance Day was held at the New Scotland Avenue Armory in Albany on Nov. 19 at which the 555 veterans who showed up had interviews with more than one hundred representatives of private business, industry and government. No job statistics were available at prestime, but 240 vets sought information and counseling on rights and benefits from N.Y. State Veterans Affairs Counselors on duty at the Armory.
- In Missouri, on Nov. 11, the Legion, the V.F.W., the D.A.V., the National Alliance of Businessmen, the Missouri and Illinois Employment Security Offices, the VA and other organizations banded together to hold a huge Veterans Job Fair at the St. Louis Arena, Som 7,000 vets crowded the arena during the day seeking jobs from 218 metropolitan area employers. It was estimated that 500 jobs resulted and that another 500 might eventually be hired as a consequence of the contacts. It is estimated that 15,000 veterans are currently unemployed in the Greater St. Louis Area, with about 7,000 of them Viet vets.
- In Washington, a job team of the Seattle Veteran Action Center (a department of the Office of Human Resources) recently reported that in its first six weeks of operations it had processed about 450

Dep't Chaplains' Nat'l Conference



Photo above shows Legion Department Chaplains gathered at Nat'l Hq recently for their Annual National Conference. The Chaplains toured Hq, got briefings from division heads, discussed Chaplain's duties and recommended future actions.

veterans, made 104 direct job referrals, 304 supportive service referrals and placed 50 vcterans in jobs. SEA-VAC dcals with the whole range of veterans problems and has links with all other local agencies in the field.

• In Ohio, Radio Station WOHI of East Liverpool, runs a tape eight times a day featuring a different veteran in the

area who necds a job.

• In Washington, D.C., WRC disc jockey Paul Anthony each day conducts five-minute interviews with unemployed veterans, thus publicizing their needs.

• In Nashville, Tenn., WLAC-TV each morning has shown a photo and presented qualifications of a local unemployed veteran so that interested employers can contact him through the State Office of Employment Security.

Operation Outreach

In 1971, as part of its "Reach Out" Program, the Legion formed a cooperative relationship with the American Association of Junior Colleges in order to seek ways to develop programs that would assist veterans in bettering themselves through education.

Shortly after that the Legion's National Membership Director, J. Lloyd Wignall, was in Los Angeles, Cal., on membership business when he was approached at a meeting by Mary C. Boughen, the First Vice Commander of Sawtelle Post 322, about how to help a young Viet vet patient at the nearby VA hospital who had artistic ability but lacked instruction and materials with which to work. Mr. Wignall suggested assistance might be available under the Association-Legion Veteran's Outreach Program. From that point on the wheels turned swiftly. By Nov. 30 officials of the Los Angeles Community Colleges System and the VA had conferences which may lead this spring to extension courses being offered at the VA hospital and to evening courses at the college with hospitalized vets being transported to school by VA buses.

A questionnaire sent out by the American Ass'n of Junior Colleges indicates that at least 10 other colleges around the nation may have similar programs under consideration or in action in cooperation with VA hospitals.

Richfield Post Builds Boxers

A number of Legion posts around the nation sponsor boxing programs or host local tournaments leading to city, state or national events.

Typical of this type of sponsorship activity is Minneapolis-Richfield Post 435 of Minneapolis, Minn., which cosponsors the Richfield Boxing Club along with the Fred Babcock VFW Post 5555, the South Suburban Exchange Club and the Richfield Police.

American Legion Membership

Here is the departmental breakdown of Legion chrollments for the year 1971.

ALABAMA	30,163
ALASKA	3,512
ARIZONA	17,400
ARKANSAS	30,345
CALIFORNIA	122,295
CANADA	840
COLORADO	20,344
CONNECTICUT	31,935
DELAWAREDIST. OF COL.	4,940
ELOPIDA	7,250 55,334
FLORIDAFRANCE	35,3 <i>3</i> 4 3,438
GEORGIA	49,001
HAWAII	9,067
IDAHO	7,854
ILLINOIS	189,659
INDIANA	121,786
IOWA	94,652
ITALY	2,929
KANSAS	63.560
KENTUCKYLOUISIANA	29,431
LOUISIANA	47,511
MAINEMARYLAND	21,806
MARYLAND	48,297
MASSACHUSETTS	
MEXICO	1.389
MICHIGAN	73,275
MINNESOTA	
MISSISSIPPI	26,547
MISSOURI	62,496
MONTANA	12,875
NEBRASKA	
NEVADA NEW HAMPSHIRE	3,246 21,076
NEW JERSEY	78,287
NEW MEXICO	9,170
NEW YORK	217 289
NORTH CAROLINA	44.799
NORTH DAKOTA	
OHIO	
OKLAHOMA	46,690
OREGON	22,140
PANAMA	1,134
PENNSYLVANIA	260,135
PHILIPPINES	
PUERTO RICO	14,700
RHODE ISLAND	
SOUTH CAROLINA	
SOUTH DAKOTA	29,452
TENNESSEE	
TEXAS	
UTAH	7.059
VERMONT VIRGINIA	13,019
WASHINGTON	31,001
WEST VIRGINIA	36,922 25,630
WISCONSIN	
WYOMING	
	,,150

TOTAL2,711,561

It all started in 1960 when the Exchange Club and the Richfield Police got into the boxing business with 45 juniors and 35 seniors. Those two organizations soon found they needed help and one year later the Richfield Legion Post and the VFW Post chipped in with time and money for the volunteer non-profit program.

For the next seven or eight years the boys trained in a small gym area marked off in a health center until the Richfield School Board and City Council found larger quarters for them in a grade school basement in 1968. This also proved inadequate for a number of reasons and in 1970 the group moved to the basement of another grade school with more adequate facilities.

With an average of 55 juniors and 45 senior boys now in the program, fight cards are held at each post auditorium on a rotating schedule before crowds averaging 175 adults and 75 children. During the season club schedule the youthful pugilists travel to cities in surrounding and nearby states for exchange bouts with other boxing clubs. All are preparing for Golden Gloves Tournament participation.

In 1962 Richfield Boxing Club juniors won 38 of 40 bouts to take the Minneapolis City Championship against 12 other clubs. They also won in 1965-66-67 and were second or third in 1968-69-70. The senior fighters finished fourth or fifth until 1968-69-70 when they won the championship. They're pointing for the city championship again in 1972.

With a little luck, Richfield boxers could wind up in the National Golden Gloves Tournament which will be held in Minneapolis March 16-20.

Why Be a Legionnaire?

Once in a while an anecdote comes along that so aptly proves a point.

Such a one is the following little story plucked out of the *Georgia Legionnaire*, the newspaper edited by Georgia Department Adjutant George Osborne.

It seems there was a veteran who had never joined the Legion. All his life he participated in the benefits which, to a large measure, had been won by the efforts of the Legion. But he never joined though he was asked many times. Now, on his deathbed, he was telling his wife his last wishes: "Please do something for me. 1 want Legionnaires to be my pall-bearers."

"But you nover bolonged to the Legion," his wife tearfully responded. "Why do you now want Legionnaires to be your pallbearers?"

"Dear," he replied in a fading, weak voice, "they've carried me this far. They may as well carry me the rest of the way!"

S.S. American Legion Painting

A painting of the S.S. American Legion, a 32,000-ton containerliner which sails under the United States Lines flag. was presented to the Legion at a luncheon at the Army-Navy Club, Washington, D.C. The painting, by David Campbell-Taws, was given to the Legion by Mrs. Gwen Galbraith, wife of Past Nat'l Cmdr William E. Galbraith (1967-68), and will hang in the Legion's Washington office. The United States Lines had commissioned artist Campbell-Taws to do the painting for the ship's sponsor, Mrs. Galbraith, who had christened the S.S. American Legion when it was launched Feb. 27, 1968, at the Sun Shipbuilding & Dry Dock Co., Chester, Pa. In addition to Crndr Galbraith, three other Past Nat'l Cmdrs were present at the luncheon: Paul H. Griffith (1946-47), Donald E. Johnson (1964-65). and John E. Davis (1966-67). Representing the United States Lines were Nicholas Bachko, senior vice president, and Commodore of the Fleet Capt. Leroy Alexanderson, currently master of the S.S. American Legion and former master of the S.S. United States.

BRIEFLY NOTED



Maine Legion gives \$8,800 for a chapel.

The Maine Legion has donated \$8,800 to the erection of the proposed All-Faiths Memorial Chapel to be constructed at the Maine Veterans Cemetery in Augusta. Dep't Cmdr Clifford Quinney, right in photo, made the presentation to Gov. Kenneth Curtis. At left are Harry MacBurnie, campaign treasurer, and Dep't Adjutant Anthony Rumo. During past years, former Dep't Chaplain Ivan Forsythe directed the Legion drive for funds to support the chapel program. The Maine posts will continue the drive.

Rep. F. Edward Hebert (La.), chairman of the House Armed Services Committee, inserted a high tribute to The American Legion in the Dec. 6, 1971 issue of the Congressional Record. Entitled "The Formation of The American Legion," the article is from a recent speech by E. Davis McCutchon, of Pass Christian, Miss., a delegate from Louisiana who attended the Legion's St. Louis Caucus in May 1919.



Wisconsin aids Grand Army Home.

Wisconsin Grand Army Home commandant Arlin Barden (center in photo) was presented with checks totalling \$3,000 from Dep't Cmdr Vern Grosenick and Dep't Auxiliary President Lorenc Doerfler at King, Wis. The Auxiliary check for \$2,500 is for purchase of a paper cutter. The \$500 Dep't check will go toward a rescue vehicle for the Home. The checks were presented during the annual Hospital Tour made by Legion officials as part of their regular duties.

POSTS IN ACTION

Post 925, Philadelphia, Pa., for the past five years has sent home for Christmas one or more disabled veterans from Philadelphia Naval Hospital. Most recently, it was Marine Pfc Juan Ronas, who lost his right leg in Vietnam. He went home to San Juan, Puerto Rico, for the holidays.

Post 281, Waukegan, Ill., completed its Third Annual Veterans Day Cross Country Run which attracted over 800 competitors in categories ranging from first grade through college and open amateur runners. Distances were from one-half mile to three miles. The event was sponsored jointly by Post 281, the Waukegan H.S. Pacesetters, and the Waukegan Park District. Trophies and ribbons were awarded to the first three place winners in each division. Merchants donated cash and merchandise. Because of the project's popularity, says Post 281 Cmdr Wesley Newman, post

members would like to see it expanded into a national Legion activity with local, district, Department and National competition.

Post 21, Philadelphia, Pa., held a Drug Education Night. For its general efforts in this direction for more than a year, the post was praised by the Philadelphia Community Mental Health Consortium. In the photo, planning the Drug Education Night, are, l. to rt.: Joseph Naimoli, Post Adjutant; Rev. William Bouton,



Philadelphia Post 21 aids drug fight.

pastor of the Southwest (Philadelphia) Methodist Church and chairman, Treatment Committee of the Southwest Organization Regarding Drugs (SWORD): Michael Conte, Post Cmdr; Michael Pellegrino, Legionnaire and president of SWORD; William McBridge, Jr., Post Jr. Vice Cmdr, and John Walker, Jr., Legionnaire and chairman, Enforcement Committee, SWORD.



Viet Cong POW treatment: an example.

Post 21, Meridian, Miss., took part in an Americanism rally which drew about 10,000 spectators to a parade that focused attention on POWs and MIAs in Vietnam. In the photo, Lt. Kenneth



In 3rd X-Country Run staged by Post 281, Waukegan, III., this was the Adult Div.



These were the entrants in the Grade School Div. in Post 281's run competition.

Longeway of McCain Field, NAS, Meridian, demonstrates the living conditions to which American POWs are subjected for days, weeks, and months at a time. This "tiger cage" was part of the POW/MIA float.

Post 28, Okinawa (the Legion's largest post at present), recently gave \$7,000 to the USARYIS Youth Activities Program for 1972. A gift of \$2,000 went to the project of teaching children with impaired hearing conducted in the School of Hope at Camp Kue. A check for \$500 was handed over to Army Emergency Relief. Almost \$600 will purchase new attire for the girls in the Pep Squads (cheer leaders) of Post 28 athletic teams.

PEOPLE IN THE NEWS

J. Edward Wieland, director of The American Legion's Education and Scholarship Program, appointed to the newly formed Veterans Administration Nat'l Task Force on Education and the Vietnam Era Veteran, created to assist the VA in the evaluation of existing programs and services available to the serviceman and veteran, in the assessment of contemporary legislative and regulatory proposals, and in the planning and implementation of new programs and services.

Eugene Hirsch, 42, a Cheyenne, Wyo., Legionnaire, appointed Dep't Adjutant. He recently retired from the United States Air Force after 20 years of service.

William F. Hauck, Nat'l Adjutant of The American Legion, honored at a buffet reception on the occasion of his 20 years of service to the Legion. The ninth man to hold the position of Chief Administrative Officer, he was named to the post in October 1967 by Nat'l Cmdr William E. Galbraith. His prior responsibility was as Executive Director of the Legion's Washington office since 1952. Congratulations came on many letterheads, including that of the White House. Among the gifts the Nat'l Adjutant received were a color TV console, a black and white portable TV, and a set of patio redwood furniture.

Past Nat'l Chaplain Rev. Father Robert G. Keating, recuperating from paralysis at Gaylord Farms Hospital, Wallingford, Conn. 06492.

Warren H. Atherton, of Stockton, Calif., Past Nat'l Cmdr (1943-44), honored with a party on his 80th birthday. Acknowledgements were received from President Nixon, Governor Ronald Reagan, New York Governor Nelson

Rockefeller, and other notables. Former U.S. Supreme Court Chief Justice Earl Warren spoke in a tribute to Past Cmdr Atherton.

E. Meade Wilson, of Mulberry, Fla., a member of the Legion's Advisory Committee to the Nat'l Cmdr, given a "Day" by Mayor Carl Ellis and honored at an awards ceremony by Post 72 for his "over 50 years of dedicated service to his country and to the Legion." More than 200 persons, including state and national Legion officials, came to honor "Uncle Meade," who has held Legion offices at post, district, Department and national levels. He was Dep't Cmdr in 1945-46, Nat'l Executive Committeeman in 1946-66, yielding that office on doctor's orders. Among the many awards Meade received was a national Legion award from Nat'l Executive Committeeman John J.

DEATHS

CHASE LTD., PHOTO



Paul E. Lackey

Paul E. Lackey, 51, of Springfield, Va., assistant executive director of the Legion's Washington, D.C., office since 1952, of complications following earlier surgery. He had served as a Legion County Service Officer in Lawrence Co., 1nd., as Dep't Service Officer, Indiana, and as aide to Nat'l Cmdrs George R. Craig (1949-50) and Donald R. Wilson (1951-52).

Melvin T. Dixon, 54, of Dunedin, Fla., Dep't Service Officer. He suffered a massive coronary attack in his office on the morning of January 7. He had been the Florida Legion's State Service Officer for 26 years and was also the Director of the State Div. of Veterans Affairs for the State of Florida. The WW2 veteran was chairman of the Legion's Resolutions Assignment Committee. In 1967 and 1968 he served on the U.S. Veterans Advisory Commission sponsored by President Lyndon Johnson and appointed by the Administrator of Veterans Affairs.

William B. Healey, 78, of Wilkes Barre, Pa., Past Nat'l Vice Cmdr (1923-24), Past Dep't Cmdr (1922-23), and Past Nat'l Executive Committeeman (1922-

Caesar L. Aiello, of Hyattsville, Md., Past Dep't Cmdr (1933-34) and an attorney and banker.

Frank B. O'Connell, 79, of Lincoln, Neb., the first Nebraska Legion Dep't Adjutant (1919-25); he was the author of several books, including "A History of The American Legion in Nebraska, published in 1922. Colonel O'Connell served a combined total of 30 years on active duty with the Nat'l Guard and Army during WW1 and WW2. He was deputy state director of the Selective Service System from 1940 to 1947, then spent two years as an advisor to the Chinese Nationalist Army.

COMRADES IN DISTRESS

Readers who can help these veterans are urged to do so. Usually a statement is needed in support of a VA claim.

Notices are run only at the request of

Notices are run only at the request of American Legion Service Officers representing claimants, using Search For Witness Forms available only from State Legion Service

claimants, using Search For Witness Forms available only from State Legion Service Officers.

65th Div. 259th Reg. Co G (Sunday, Mar. 17, 1945, Saarlaurten, Germany)—Need information from any comrade in 1st Platoon who recalls that Charles R. (Chuck) Pursley was pinned down by 88 Art'y at very close range for approximately six hours, resulting in hearing loss and extensive nerve damage in the high frequencies. Write "CD108, American Legion Magazine, 1345 Ave. of the Americas, New York, N.Y. 10019"

551st Tr School Sqdn (Roswell, N.M. July 1943)—Need information from Cpl Ihrke (perhaps of Chicago area) and any other comrades who recall that Thomas W. Barrick fell from wing of a B-17 onto a concrete parking ramp. Write "CD110, American Legion Magazine, 1345 Ave. of the Americas, New York, N.Y. 10019"

287th QM Co (APO 971, Seoul, Korea, June 27, 1953)—Need information from Capt Taylor, 1st Sgt Tompkins (East Texas), Sgt Golightly and any other comrades who recall that acid was spilled from a refrigeration van during repairs. Manuel C. Nieto, who was a corporal in charge of repairs, has filed a claim for injuries. Write "CD111, American Legion Magazine, 1345 Ave. of the Americas, New York, N.Y. 10019"

13th Air Force, 5th Bomb Gp, 394th Sq (South Pacific, Bismarck Arch, New Guinea 1944-45)—Need information from Capt Clary (pillot), Lt Keedy (navigator), Bosley (engineer, Elmira, N.Y.) or any other comrades who knew that Daniel E. Zengerle suffered from nervous stomach on bombing run, could keep nothing on stomach, and vomited in plane before reaching target. Write "CD112, American Legion Magazine, 1345 Ave. of the Americas, New York, N.Y. 10019"

65th Div 260th Reg't, Co M (Camp Shelby, Miss., Aug. or Sept. 1944)—Need information from Sgt White (1st Platoon), Sgt Mengelkamp or any other comrades who recall that Everett F. Coen blacked out after a long march and had to be carried into the barracks. Write "CD113, American Legion Magazine, 1345 Ave. of the Americas, New York, N.Y. 10019"

165th AAA, Gun Bn, Bat C (Bi

Frank N. Bruhn, 75, of Yakima, Wash., Past Nat'l Executive Committeeman (1935-37); he served as Dep't Chairman, Foreign Relations (1934-35) and Veterans Employment (1938-39).

Legionnaire David Sarnoff, 80, of New York, founder of the Nat'l Broadcasting Co. and head of the RCA Corp., recipient of the Legion's Nat'l Cmdr's Award for 1965; an Army officer in communications, in WW2 he was a special consultant to General Eisenhower's HQ in Europe.

Norbert W. Schmelkes, of Mexico, D.F., Past Dep't Adjutant (1952-53), Past Dep't Cmdr (1953-54), Alternate Nat'l Executive Committeeman (1957-60). and Nat'l Executive Committeeman (1960-64).

Ed. B. Smith, of Greenville, S.C., Past Dep't Cmdr (1964-65).

E. J. Callaghan, 78, of Helena, Mont., Past Dep't Cmdr (1962-63) and a member of the executive section (1970-73) of the Veterans Affairs and Rehabilitation Commission.

B. B. Jenkins, of Ventura, Calif., a current member of the Trophies, Awards and Ceremonials Committee.

Ben B. Naffziger, 78, of Greeley, Colo., Past Dep't Cmdr (1938-39) and Alternate Nat'l Executive Committeeman (1939-41).

John A. High, 84, of West Swanzey, N.H., Past Nat'l Vice Cmdr (1953-54) and Past Dep't Cmdr (1949-50).

Samuel J. Gorman, of Hartford, Conn., Dep't Baseball Director, 1960-69, and voted Dep't Outstanding Legionnaire, 1957.

American Legion Life Insurance Month Ending Dec. 31, 1971

New Applications rejected

American Legion Life Insurance is an official program of The American Legion, adopted by the National Executive Committee, 1958. It is decreasing term insurance, issued on application to paid-up members of The American Legion subject to approval based on health and employment statement. Death benefits range from \$40,000 (four full units up through age 29) (25 in New Jersey) in decreasing steps with age to termination of insurance at end of year in which 75th birthday occurs. Available up to four full units at a flat rate of \$24 per unit a year on a calendar year basis, pro-rated during the first year at \$2 a month per unit for insurance approved after January 1. Underwritten by two commercial life insurance companies, the Occidental Life Insurance Co. of California and United States Life Insurance Co. in the City of New York. American Legion Insurance Trust Fund is managed by trustees operating under the laws of Missouri. No other insurance may use the full words "American Legion Insurance Division, P.O. Box 5609, Chicago, Illinois 60680, to which write for more details.

Gen. Emmett (Rosy) O'Donnell, 65, distinguished in Pacific combat in WW2, of coronary arrest at his home in McLean, Va. After retirement in 1964, he was elected president of the USO.

Harold E. Morris, 77, of Sarasota, Fla., Past Dep't Cmdr, Indiana (1947-48).

Henry S. Beardsley, 76, of Chillicothe, Mo., Past Nat'l Executive Committeeman (1934-36). A WW1 veteran, he served on the Legion's Nat'l Rehabilitation Committee Advisory Board (1946-

Earl N. Genzberger, of Butte, Mont., Past Dep't Cmdr (1935-36) and Past Alternate Nat'l Executive Committeeman (1937-39).

Rev. Charles L. Parker, of Hartford, Conn., Past Dep't Adjutant (1950-69) and Past Dep't Vice Cmdr (1964-65).

NEW POSTS

The American Legion has recently chartered the following new posts:

Navajo Nation Post 85, Window Rock, Ariz.; Scottsdale Post 88, Scottsdale, Ariz.; Grand Junction Post 405, Grand Junction, Mich.; Alpha Sigma Mu Post 492, Trenton, N.J.; Four Corners Post 120, Shiprock, New Mexico; Flick-Salkeld Post 589, Herman, Pa. and Veterans Memorial Hosp. Post 176, Quezon City, Philippines.

LIFE MEMBERSHIPS

The award of a life membership to a Legion-naire by his Post is a testimonial by those who know him best that he has served The Ameri-

men best that he has served the American Legion well.

Below are listed some of the previously unpublished life membership Post awards that have been reported to the editors. They are arranged by States or Departments.

Gerhard W. Bremel (1971), Post 716, Los Alamitos, Calif. Donald H. Roberts and Albert P. Lockley (both 1971), Post 1, Denver, Colo. William G. Williams (1971), Post 259, DeBary,

Roland J. Davies (Dr.) (1969), Fred C. Behrman, Fred Pretet, Melvin Ladendorf and Victor Wagner (all 1971), Post 463, Roanoke, Ill. rving E. Barnett (1972), Post 807, Chicago,

Harold M. Knoblauch (1971), Post 377, Wood-

Frank Pretz, Elmer Card, Albert L. Harvey, Leonard Kemp and Carl M. Wilson (all 1971), Poet 173, Ayrshire, Iowa Wilbert E. Thomas (1971), Post 188, Kansas

Timothy H. Bourg (1971), Post 315, Galliano, Damon E. Palmer (1972), Post 199, West Peru,

Damon E. Palmer (1972), Post 199, West Peru, Me.
Robert Aldridge and Charles A. Reck (both no date), Post 331, Bridgman, Mich.
Herman Hinz and Clyde Reynolds (both no date), Post 61, Perham, Minn.
Hal J. Leonard (1971), Post 468, Minneapolis, Minn.
Fall B. Ettervold (1971), Post 578 Corne.

Minn.
Earl R. Ettesvold (1971), Post 525, Cyrus, Minn.
Earl Lieber (1969), Hugo A. Olderog (1966), Rudolph H. Pieper (1969), Otto H. Polenz and Matt J. Schmitt (1970), Post 32, Papillion, Neb. Frank Feltz (1971), Post 421, E. Hanover, N.J. Henry Lang, Charles Lawrence, William Liebowitz, Ralph Mone and William Moses (all 1971), Post 14, Brooklyn, N.Y. Sam Goldstein (1971), Post 22, New York, N.Y.

Amedio Cappione, Amos Whalen, Fred La-Fortune, Claude Kezer and Dennis Fregoe (all 1972), Post 79, Massena, N.Y.

Anthony Emma, Joseph Canariato, Charles Munson, Anthony Kovac and Evers Eliason (all 1971), Post 131, Whitestone, N.Y.
Frederick A. Huestis (1928) and Douglas J. Wrenn (1970), Post 265, Garden City, N.Y.
Frederick H. Lutz and Thomas J. McCarthy (both 1971), Post 265, Garden City, N.Y.
Charles R. Thompson, Everetie Waring, Graham Wells and Manford J. Williams (all 1967), Post 418, Phoenix, N.Y.
Francis E. Murray, Ray T. Noblit, George F. Penney, Edw. Sheridan and Frank C. Kautz (all 1972), Post 685, Port Jervis, N.Y.
Clair E. Dickinson, Victor R. Dickerson, Eugene L. Kelley and George R. Low (all 1971), Post 1308, Pine Bush, N.Y.
Casimer Midura (1971), Post 1322, North Tonawanda, N.Y.
Homer Van Hall, Jacob Haak, Leland Stewart and Douglas Orbaker (all 1970), Post 1430, Marion, N.Y.
Charles Salading (1961), Alfred F. Schung, Charles

Marion, N.Y.
Charles Saladino (1961), Alfred E. Schung (1956) and William O. Lampe (1971), Post 1812,

Plainview, N.Y.

James Flynn, Otto Genter, Jacob Deidc,
Alfred Kalbus and Edwin Leiby (all 1972), Post
137, Ellendale, North Dakota
A. H. Robinson (1971), Post 168, St. Thomas,

North Dakota

North Dakota Everett Mace, Fred J. Mayer, Chester D. Mc-Clelland, Ralph G. Miesse, Sr. and James E. Miller (all 1970), Post 11, Lancaster, Ohio. William E. Miller and Harley Masters (both 1971), Post 312, Belmont, Ohio

Mahlon A. Emrey (1971), Post 602, Spring City, Pa.
Robert A. Shimshock, John Shuba, Jr. and James V. Volpe (all 1971), Post 753, New Salem,

John J. Greenless (1971), Post 60, Providence, R.I. Roland G. Mercier (1972), Post 75, Central Falls, R.I.

John Porter (1970), Chris C. Rath and Chris J. Schanzenbach (both 1972), Post 78, Leola, South Dakota

J. Schanzenbach (both 1972), Post 18, Leola, South Dakota
Charles Lauer and Nick Reishling (both 1972). Post 145, Howard, South Dakota
William Campbell, Guy Giltner, Lawson
Johnson, Fred Schuttler and Walter Vaughn
(all 1971), Post 164, Spearfish, South Dakota
Vernon H. Belk and Ole A. Eidsness (both 1971), Post 227, Henry, South Dakota
Horace G. Sadler (1970), Clyde C. Carson, Jr.
and Ernest E. Rivard (both 1971), Post 29,
Sherman, Texas
Arthur P. Labombard (1971), Stanley C.
Ripper (1946), Sheldon W. Briggs (1965), Daniel
H. Bartley and Henry S. Broughton (both 1971), Post 14, Vergennes, Ver.
W. M. Tuck, James Young, W. J. Henderson,
F. L. Hunt and E. H. Lacy (all 1971), Post 8,
South Boston, Va.
Roberto Salas (1972) Post 37, Portsmouth, Va.

South Boston, Va.

Roberto Salas (1972) Post 37, Portsmouth, Va.

A. W. Johnson (1965), Edward Reichenbach (1966), Charles Fischer (1969), William Hall and Paul Dittenhafer (both 1971), Post 160, Seattle, Wash.

Ivan Chilbeck, and Carl Hathaway (both 1971), Post 176, Vancouver, Wash.

Nicholas Lance (1971), William Scholz, Jr. (1969) and Melvin L. Weiman (1971), Post 306, Middlesex, N.J.

Conrad T. Teschke, John S. Bergan, Emil Berndt, Arthur Brandt and Emil Christianson (all 1971), Post 217, Bonduel, Wis.

Leonard G. Albrecht, Andrew Anderson, Edward Billiet, John F. Dranginis and M. H. Esser (all 1970), Post 475, Arpin, Wis.

Life Memberships are accepted for publication only on an official form, which we provide. Reports received only from Commander, Adjutant or Finance Officer of Post which awarded the life membership.

They may get form by sending stamped, self-addressed return envelope to:

"L.M. Form, American Legion Magazine, 1345 Avenue of the Americas, New York, N.Y. 10019."
On a corner of the return envelope write the number of names you wish to report. No written letter necessary to get forms.

OUTFIT REUNIONS

Reunion will be held in month indicated. For Reunion will be held in month indicated. For particulars write person whose address is given. Notices accepted on official forms only. For form send stamped, addressed return envelope to O. R. Form, American Legion Magazine, 1345 Avenue of the Americas, New York, N.Y. 10019. Notices should be received at least five months before scheduled reunion. No written letter necessary to get form.

Earliest submission favored when volume of requests is too great to print all.

ARMY

1st Medical Reg't—(Aug.), Arnold Gaarder, Rt.
 2 Box 26, Mahnomen, Minn. 56557
 2nd Div—(July), William Belvin, 1033 Woodburn Dr., Columbus, Ga. 31907



Joint effort by City of Cambridge, Mass., Veterans' Services, three Legion posts (Post 27, Post 358, Post 442), and other veterans' organizations provides vital aid for veterans. L. to rt.: Leo Malloy, Nat'l Executive Committeeman; Pat Reale, Com. of Vet. Services; Mayor Alfred Velluci.

3rd & 6th Army, Hq Co (WW2 1940-43)—
(June), George Mullens, 518 Park, Baytown, Texas 77520
4th Arm'd Div (NYC Chapter)—(April), Ed Rapp. 144-47 72nd Rd., Flushing, N.Y. 11367
7th Div (WW1)—(May), Hobert Young, 82-D Troy Dr., Springfield, N.J. 07081
13th Corps—(July), John Bitting, 10104 Quinby St., Silver Springs, Md. 20901
17th Airborne Div—(Aug.), Vic Mittleman, 139 W. Plumstead Ave., Lansdowne, Pa. 19050
44th Eng, Cbt Bn—(Aug.), Wm. Squires, R ±2, Versailles, Ind. 47042
45th Gen Hosp—(June), Sam Gangi, 103 N. 15th St., Bloomfield, N.J.
45th Ord Co (MM)—(June), Fred Snouffer, 6194
Hutchinson St., Worthington, Ohio 43085
52nd Sta Hosp—(April), Mrs. Mary Stanley, 1076 Los Angeles Ave. N.E., Atlanta, Ga. 30306
69th Div—(Aug.), Clarence Marshall, 101
Stephen St., New Kensington, Pa. 15068
69th Sig Bn—(July), Joe Frank, 48209 N. Branch Dr., Mt. Clemens, Mich. 48043
82nd Field Art'y, Horse (WW1)—(July), Wm. Hutchinson, Box 381, Faulkton, So. Dakota Stephen St., New Kensington, Pa. 15068
69th Ren Trp, 90th & 36th Sqds—(July), David Davis, 4923 W. 65 Pl., Aruada, Colo. 80002.
94th Div—(July), Roger Keith, 170 Hillberg Ave., Brockton, Mass. 02401
95th Div—(Aug.), Theodore Nelson, P.O. Box 1274, Chicago, Ill. 60690
99th Div—(July), Jack Hill, Chetwynd, Rosemont, Pa. 19010
101st Airborne Div—(Aug.), Walter Miller, Jr., P.O. Box 454, Greenville, Tex. 75401
101st Gen Hosp—(July), Brother Timothy Rapa, LaSalle Academy, 612 Academy Ave., Providence, R.I. 02908
105th AAA AW Bn—(June), Eldred Baker, R.R. #1, Strasburg, Ohio 44680
111th Inf Co C (WW2)—(May), Edward Ellis, 321 Clearfield Ave., Norristown, Pa. 19401
112th Cav (Midwest)—(Aug.), Lionel Carter, 1621 Cleveland St., Evanston, Ill. 60202
125th AAA—(Julv) E.E. Ballert, Box 585, Bryan, Ohio 43506
139th Inf, Co K.—(May) Frank Plummer, 609
S. Kansas Ave., Newton, Kans. 67114
148th Inf, Co K. & Hq Co (WW2)—(June), Edward Kohler, 803 N. Circle Dr., Wapakoneta, Ohio 45895
151st Inf, Co D—(June), Virgil Adkins, RR ±1, Arlington, Ind. 46104

Ward Konier, 803 N. Circle Dr., Wapakoneta, Ohio 45895
151st Inf, Co D—(June), Virgil Adkins, RR ±1, Arlington, Ind. 46104
158th Field Art'y Bn, Bat A—(July), Donald McAllister, R #3 Box 63, Ponca City, Oklahoma 74601

McAllister, R #3 Box 63, Ponca City, Oklahoma 74601
166th-938th FA, Bat C—(April), Hank Slater, Wilson Rd. RD2, Phoenixville, Pa. 19460
203rd Gen Hosp (ETO)—(July), Percy Carnes, 1201 E. Mulberry, Apt. #403, San Antonio, Texas 78209
214th MP Co—(Aug.), Ellis Hopfenberg, P.O. Box 5, Uniondale, N.Y. 11553
270th Field Art'y, Bat A—(June), Bert Mullen, Box 235, Inola, Okla. 74036
314th Inf Co C (WW2)—(Aug.), Richard Rairdon, RR 1, Lewistown, O. 43333
326th Glider Inf, 1st Bn, Hq, Hq Co—(June), Thomas Catanzaro, 64-22 Metropolitan Ave., Middle Village, N.Y. 11379
337th Rcg't & 328th Field Art'y & 810th Eng (WW2)—(July), Charles Hacker, 816 N. Shippen St., Lancaster, Pa. 17602
342nd FA Bn, Bat B—(June), George Jackson, 908 E. Monroe, Mt. Ayr. Iowa 50854

356th AAA Slt Bn (WW2)—(July), Harold Bogard, 5636 Oakland Drive, Kalamazoo, Mich. 49001

Bogard, 5636 Oakland Drive, Kalamazoo, Mich. 49001

S7th AAA Slt Bn, Bat A & Hq Bat (WW2)—(Aug.), Grady Brinkley, Box 188, Welcome, N.C. 27374

80th Gen Serv Eng (WW2)—(June), Edward Ziats, Box 257, Marianna, Pa. 15345

379th AAA AW Bn—(Aug.), Adrian Wells, 4519 Canyon Rd., Dayton, O. 45414

411th Reg't, Co M—(May) Vernon Silha, Coon Valley, Wis. 54623

436th Ord MVA Co, Portable—(Aug.), Lester Burtner, 937 Central Park View, Harrisonburg, Va. 22801

470th AA AW Bn (WW2)—(July), John Molton, RD 1 Box 70, South Fork, Pa. 15956

471st Ambulance Co (WW2)—(April), Jim Lamia, 4147 Garvey Dr., Mehlville, Mo. 63129
533rd AAA AW Bn (WW2)—(Aug.), Willard More, 143 37th St. N.E. Apt. N-1, Cedar Rapids, Iowa 52402

546th AAA AW Bn, Mbl, Bat A—(Aug.), Chuck Strempke, P.O. Box 383, Riverside, Calif. 557th AAA AW Bn, Mbl, Bat A—(Aug.), Chuck Strempke, P.O. Box 383, Riverside, Calif. 557th AAA AW Bn—(May), Louis Edell, 2904 Oakcrest Ave., Baltimore, Md. 21234

557th Ord HM Co (TK WW2)—(July), Harding Buescher, 2 Arden Drive, Rt. 5, Jefferson City, Mo. 65101

S3rd, 594th, 595th Ambulance Cos (WW2)—(July), Ralph Webber, #9 Jones Pl., Jacksonville, Ill. 62650

604th CA AA, Bat B (WW2)—(July), Jack Bailey, 1102 S. Lafayette St., Greenville, Mich. 48838

661st Tank Dest Bn—(Aug.), William Beswick.

Bailey, 110 Mich. 48838

Mich. 48838
661st Tank Dest Bn—(Aug.), William Beswick,
P.O. Box 576, West Point, Va. 23181
727th MP Bn, Co B—(Aug.), Glenn Layman,
Rt. 1 Box 315. Sturgis, Ky. 42459
739th Eng Hvy Shop Co—(July), Kenneth Tavlor, 865 Crow's Run Rd., Freedom, Pa. 15042

Customs Post 51, New York, N.Y., gave \$1,000 of hospital equipment, in memory of former Post Service Officer Paul Van Wie, to New York area VA Hospitals. Here at Brooklyn VA Hospital are, I. to rt.: Past Cmdrs J. Cunningham and W. Rescigno, Dr. P. Casesa, Post Cmdr A. Glass, VC F. Cangiarella, and Past Cmdr J. Mulcahy.

776th Tank Dest Bn (WW2)—(July), Robert Fischer, 5008 Boston Harbor Rd., Olympia, Wash. 98506

Wash. 98506
777th Tank Bn—(Aug.), Clarence Marshall, 101
Stephen St., New Kensington, Pa. 15068
780th EPD Co (CBI)—(July), Raymond Smith,
109 Turner Ave., Edison, N. J. 08817
926th Sig Bn, 9th TAC, 322nd & 422nd Sig Cos
(WW2)—(Aug.), Russell Ever, P.O. Box 202,
Palmyra, Ill. 62674
1880th Eng Avn Bn—(Aug.), A.E. Perkins,
Cambrills, Md., 21054
Topographic Eng (WW2)—(Aug.), James
Heyer, Box 308, Sumner, Iowa 50674

NAVY

1st Corps Motor Tr Bn, Co C (FMF)—(Aug.), Wally Lueder, 349 W. Joe Orr Rd., Chicago Hts, Ill. 60411
4th Marine Amphib Tractor Bn—(Aug.), Gordon Russell, R #5 Box 193, Iowa City, Iowa 22nd Marine Reg't, Spec Weapons Co—(July), E.W. Skolnik, 28447 Peppermill Rd., Farmington, Mich. 48024

E.W. Skolnik, 28447 Peppermill Rd., Farmington, Mich. 48024 23rd Seabces (WW2)—(July), Andrew Lorenz, 308 Steele St., Monroeville, Pa. 15146 30th Seabces—(May), Nat Kapelsohn, 107 So. Munn Ave., Newark, N.J. 07106 32nd Special Seabces—(Aug.), Ben Lasater, Hillsboro, Tenn. 37342

93rd Seabees (WW2)—(Aug.), Robert Heidenreich, 3026 Paddock Rd., Omaha, Neb. 68124 League of Naval Destroyermen—(Aug.), Lg. Nav. Des., Drawer "M," So. Windsor, Conn. LST 177—(July), Vincient Mongiello, 201 W. Venango St., Mercer, Pa. 16137
Patrol Wing Four Airdales: VP 41, 42, 43, 45, 61, 62, VPB 135, 136, 139 (WW2)—(Aug.), James Russell, 7734 Walnut Ave., S.W., Tacoma, Wash. 98498
USCG Tra Sta (DGS), Weidner, Est—(Feb.), C. E. Bould, Wagontown, Pa. 19376
U.S. Naval Gp (China) SACO—(July), Robt. Eastman, 100 Cypress Gardens Blvd., Winter Haven, Fla.
USS Albacore (SS218)—(June), Ernest Talbot, 50 Wyoming Rd., Paramus, N.J. 07652
USS Allentown (PF52)—(July), Jerry Panske, 107 8th Ave., Oshkosh, Wis. 54901
USS Amycus (ARL 2)—(Aug.), Ward Vest, 1549 Thornewood Dr., Concord, Calif. 94521
USS Ancon—(June), S. A. Freedman, 212–34th St. N.W., Canton, Ohio 44709
USS Barton (DD722)—(Aug.), Jim Deters, 356 Jerlou Cir., Ft. Mitchell, Ky. 41017
USS Bunker Hill (CV17, Ww2)—(June), Dan LoRusso, 317 Main St., Medford, Mass. 02155
USS Castor (AKS 1, Korean War)—(Aug.), Gerard Cheffer, 1616 E. Roosevelt Rd., Wheaton, Ill. 60187
USS Chinaberry (AN 61)—(May), Morris Merwin, 33 Himes St. S.E., Wyoming, Mich. 49508
USS James O'Hara—(July), Ellsworth Daup, 406 Merrick St., Adrian, Mich. 49221
USS Langley—(May), John Heyer, 222 E. Pearson, Chicago, Ill.
USS Laramie—(Aug.), Bob Mills, 175 Trenton St., Melrose, Mass. 02176
USS Lloyd E. Acree (DE 356, WW2)—(Aug.), Thomas Lytle, Rt. 2, Box 199, LaFontaine, Ind. 46940
USS LST 640—(June), Raymond Bowers, P.O. Box 308, Osawatomie, Kansas 66064
USS Asper (CV4)—(Aug.), Elsworth Daue, Ind. 46940
USS LST 640—(June), Raymond Bowers, P.O. Box 308, Osawatomie, Kansas 66064

Thomas Lytle, Rt. 2, Box 199, LaFontaine, Ind. 46940—(June), Raymond Bowers, P.O. Box 308, Osawatomie, Kansas 66064
USS LST 640—(42)—(Aug.), Ed. Koch, Box 56, Clarkston, Ga. 30021
USS Thomas Jefferson—(Aug.), Mance Spillers, 5616 "D" Granada Blvd., Tampa, Fla. 33617
USS Walker, Hale, Stembel, Abbot, Erben, Bullard, Kidd, Black, Chauncey, Miller—(Aug.), Harrold Monning, 310 E. 8th St., Kewanee, Ill. 61443
USS Wharton (AP-7)—(Aug.), George Howlett, 110 Central Ave., Malden, Mass. 02148

AIR

Box 16, New Madison, O. 45346

89th Aero Sqdn (WWI)—(June), Lloyd Anderson, 8555 S. Lewis Ave., Tulsa, Okla. 74136

98th Bomb Gp H—(July), Rudolph Schmeichel, 11829 Broadmoor Dr., Dallas, Tex. 75218

367th Ftr Gp, 392nd, 393rd, 394th Sqdns—(July), J. T. Curtis, 1719 Timber Oak, San Antonio, Texas 78232

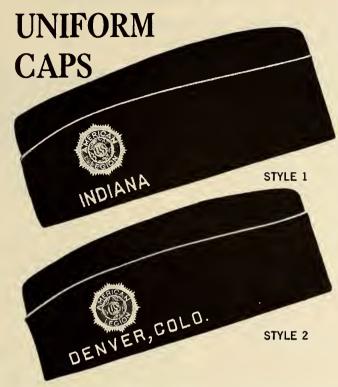
414th Bomb Sqdn—(Aug.), Robt. Woods, 25459
Colgate, Dearborn Hts., Mich. 48125
434th Bomb Sqdn, M (WW2)—(June), Dr. Clarence Singsank. 112 Greenwood Dr., Burlington, Iowa 52601

MISCELLANEOUS

World War Nurses (Dep't of Florida)—(June), Josephine LoCicero, 603 Ambassador La., Holmes Beach, Fla. 33510



Woodside, N.Y., Post 886 gave a Salute to Veterans in Memorial Park, later dedicated park to those from community who fell in last four wars. Post earlier raised funds for monument. L. to rt.: Queens Co. Cmdr Murray Adamo, John Follo, John Libert, and Post Cmdr John Sullivan, Jr.



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ALL CAPS AVAILABLE IN SERGE ONLY — A hard texture, tight weave, all wool cloth. Serge is the most wear resistant and easiest to keep clean of any previously offered cloth. Available in lined or unlined.

ALL CAPS MADE TO ORDER. About 4 weeks for delivery. Additional lettering on all caps at 20¢ per letter or numeral, ALL CAPS SHIPPED PREPAID-SPECIFY SIZE.

FORT KNOX STYLE CAPS AVAILABLE ON REQUEST AT NO EXTRA CHARGE.

AID AMERICAN LEGION PROGRAMS— Order from National Emblem Sales

DEPARTMENT CAPS. All white gabardine. Name of state in full in gold lettered embroidery. Additional lettering 20¢ per letter or numeral.

No. 71373 \$7.75

PLASTIC CAP COVER. Heavy Plastic. Can be worn on cap or used for storage. Full length metal zipper.

SPECIAL STATE INSIGNIA

Caps for the following states have special embroidery. When ordering, please add the following amount to the regular price.

CONNECTICUT - Buff Top	\$.25
KANSAS - Sunflower	.15*
LOUISIANA - red USA	.25*
MISSISSIPPI — Magnolia	.40
NEBRASKA (style 1 only) Co	vered
Wagon & Large State Name	1.20*
NEW HAMPSHIRE - Old Mai	n of
the Mountain	.50*
TEXAS - Star & Steer	.50*
VIRGINIA - Cardinal	.40
WYOMING (style 1 0nly)	
'Let-R-Buck'	1.25

* Ready February 28, 1972



SERVICE CHARGE FOR EXCHANGE OF CUSTOMER ERRORS, 50¢ PLUS POSTAGE.

LIFE IN THE OUTDOORS Wind Chill Factor

WHEN WE PLAN to go outside on a cold winter day, we look at the thermometer and dress accordingly. But then, if a wind is blowing, we discover to our regret that it's actually a lot colder than the thermometer indicated, because wind makes cold weather colder. Research on the effect of wind on temperature has resulted in a new term to indicate coldness-the Wind-Chill Factor. Here's how it works.

The body produces heat by metabolism (burning food), and excess heat is lost continually to maintain a comfortable temperature. About 5% is lost by radiation (heat rays), 5% by conduction (contact with a cooler surface), and 70% by convection (replacing of warm air near the body by cold air). The remaining 20% is lost by sweating, breath-vapor, and especially by

comfortable, heat production should balance heat loss. The problem in winter is to prevent the heat loss from becoming greater. It is easy to understand how wind intensifies heat loss. It penetrates clothing and increases convection (our greatest means of heat loss) so warm air near the body is displaced very rapidly. It also accelerates drying of the skin, including the hands and face. Therefore in winter we may be dressed adequately for the temperature but not for the wind which will steal a much greater amount of body heat. And the stronger the wind (up to about 40 mph), the greater the heat loss. The Wind-Chill Factor is a temperature that tells us how really cold it is outside. It is what the thermometer outside your window would read if it told the whole story.

continual drying of the skin. To be perfectly

		Wind	Chill	Table
	b.			

	-			TI	EMPER	ATUR	É (Fahi	renheit)	. پار س			
	Calm	. 30	. 25	20	·15	10	. 5	0	5	-10	-15	-20
(h	5	27 .	21	16	12	7	1	-6	-11	-15	-20	— 26
dw)	10	16	9	2.	-2	. _9	-15	22	-27	-3 1 _	-38	-45
ITY	15	11	1	- 6	-11	-18	-25	-33	-40	· - 45	-51	-60
,0C	20	3	-4	-9	-17	-24	-32	-40	· 46	-52	-60	-68
VEL	25	0	_ 7	-15	—22	-29	_37	-45	-5 2	-58	. —67	-75
S.	30	-2	-11	-18	-26	-33	-4 1 ,	-49	-56	- 63	-70	- 78
	35	-4	-13	-20	-27	-35	-43	.—52	-60	-67	72	-83

To use the table, choose the temperature on the top horizontal line and follow the column downward until you find the number on the horizontal line opposite the wind velocity on the left. This is the Wind-Chill Factor.

For example if the temperature is 10 degrees and the wind velocity is 15 mph, the Wind-Chill Factor is -18 (18 degrees below zero-in bold face on table).

(To save for reference, cut out chart and paste on cardboard.)

DON'T STORE GASOLINE in plastic bleach bottles, is the warning from P. W. Tift of Plummer, Idaho. It's dangerous! Calling attention to a suggestion for such use published here in December, he notes that gasoline bleeds through or disintegrates thin-walled plastic bottles making them hazardous for storage. It's even illegal in some states, he says. If you must use a plastic container, use only those types commercially made and legally approved. The Society of Plastics Industry backs up Mr.

GET READY NOW for cookouts and camping with Auto Fire, the versatile charcoal lighter and camp stove that needs no smelly charcoal lighter fluids. Unique patented design makes it possible to light enough charcoal with one double page of newspaper to broil from start-to-finish within 30 minutes the steaks or hamburgers for a family of five. Handle converts to a stove top to hold frypan or coffeepot. It'll warm a tent, ice-fishing shack or duck blind with a proper base under it. Provide ventilation when using charcoal inside. This is a reliable, proven product for which its maker



The Auto-Fire-stove and fire starter.

claims a quarter million sales. Get it at your nearest outdoor store or order direct from Auto Fire Corp., P. O. Box 487, Corinth, Miss. 38834. Aluminized steel, \$4.95 ppd., stainless steel, \$8.95 ppd.

A WIRE COAT HANGER or two comes in handy on a camping trip, reports J. C. Meabon of Sapulpa, Okla. You can use one (the unpainted type) as a roasting fork, a tongs, even as a frying pan when bent into a circle and covered with aluminum foil. Hooked onto a tree branch, it's a towel rack or a hanger for small camp articles.

AMAZING is what Francis Tenney of Adrian, West Va., calls his remedy for insect stings and bites: first apply a small amount of laundry bleach, then tie to the bite a slice of lemon sprinkled with salt. Acts within a few minutes, he says.

HOW many times have you found a good fishing hole, underwater ledge, or submerged tree, and then been unable to find it the next time? The "Fish-N-Float Marker Kit (under \$10) solves the problem. It contains six small buoy markers, weights and nylon lines. Can also be used to mark valuables you accidentally drop overboard. From: Lowrance Electronics, 12000 East Skelly Dr., Tulsa, Okla. 74128.

WHEN you paint the inside of your small fishing boat this spring, sprinkle some fine, clean sand on the wet paint, suggests Charles Gruentzel of Gillett, Wis. It will dry like sandpaper and prevent your feet from slipping when you move around.

IF YOU should suffer a cut or bad scratch in the woods and have no first-aid kit. find a standing balsam fir, pierce one of its blisters and apply the sap to the wound, suggests Ilmer Salo of Mt. Iron, Minn. He says the wound will heal quickly; he's been using this remedy for 20 years with success.

FOR A BACKPACKER three empty coffee cans-a one pound, two pound and three pound-make a handy set of nesting cooking pots, easy to carry, reports E. E. Starr of Williams, Ariz. To protect the insides, put each in a plastic bag before nesting them. Discard in a proper place.

MAKE your own camp toaster, designed by Alvin Manchester of Ord. Neb. Cut a one-pound coffee can in half. Punch some holes in the bottom with a beer-can opener to let in the heat from your stove, lay some wire across the top to hold the bread slices, use a low flame.

HAVING TROUBLE threading a light leader through the eye of a fly? Buy a needle threader, the kind used for sewing, and your problem will be solved, writes Joe Olsen of Miami, Okla. The kind with an attached magnifying glass is best.

If you have a helpful idea for this feature send it in. If we can use it we'll pay you \$5.00. However, we cannot acknowledge, return, or enter into correspondence concerning contributions. Address: Outdoor Editor, The American Legion Magazine, 1345 Avenue of the Americas, New York, N.Y. 10019.

Grass Seed Is For The Birds! Zoysia Saves Time, Work And Money

EARLY BIRD SPECIAL! ORDER NOW AND GET UP TO 200 PLUGS FREE!



Amazoy is the Trade Mark Regis-tered U.S. Patent Office far our Meyer Z-52 Zoysia Grass.

By Mike Senkiw Agronamist

Every year I see people pour more and more money into their lawns. They dig, fertilize and lime. They rake it all in. They scatter their seed and roll and water it.

Birds love it! Seeds which aren't washed away by rain give them a feast. But some seed grows, and soon it's time to weed, water and mow, mow . . . until summer comes to burn the lawn into hay, or crabgrass and diseases

That's what happens to ordinary grass, but not to Zoysia.

"MOWED IT 2 TIMES," WRITES WOMAN

For example, Mrs. M. R. Mitter writes me how her lawn ". . . is the envy of all who see it. When everybody's lawns around here are brown from drought ours just stays as green as ever. I've never watered it, only when I put the plugs in . . . Last summer we had it mowed (2) times. Another thing, we never have to pull any weeds—it's just wonderful!"

Wonderful? Yes, Zoysia Grass IS wonderful! Plant it now and like Mrs. Mitter you'll cut mowing by 2/3... never have another weed problem all summer long the rest of your life!

And from Iowa came word that the state's largest Men's Garden Club picked a Zoysia lawn as the "top lawn—nearly perfect" in its area. Yet this lawn had been watered only

once all summer up to August!

These represent but 2 of thousands of happy Zoysia owners. Their experiences show that you, too, can have a lawn that stays green and beautiful thru blistering heat, water bans-even drought!

CUTS YOUR WORK, SAVES YOU MONEY

Your deep-rooted, established Amazoy lawn saves you time and money in many ways. It never needs replacement . . . ends re-seeding forever. Fertilizing and watering (water costs money, too) are rarely if ever needed. It ends the need for crabgrass killers permanently. cuts pushing a noisy mower in the blistering sun by 2/3

WEAR RESISTANT

When America's largest University tested 13 leading grasses for wear resistance, such as foot scuff-ling, the Zoysia (matrella and ja-ponica Meyer Z-52) led all others. Your Amazoy lawn takes such wear as cookouts, lawn parties, lawn

furniture, etc. Grows so thick you could play football on it and not get your feet muddy. Even if children play on it, they won't hurt it —or themselves.

CHOKES OUT CRABGRASS

Thick, rich, luxurious Amazoy grows into a carpet of grass that chokes out crabgrass and weeds all summer long! It will NOT winter kill. Goes off its green color after killing frost, regains fresh new beauty every Spring—a true perennial!

NO NEED TO RIP OUT PRESENT GRASS

Now's the time to order your Zoysia plugs—to get started on a lawn that will choke out crabgrass and weeds all summer long and year after year.

Plug it into an entire lawn or limited "problem areas". Plug it into poor soil, "builder's soil", clay or sandy soils—even salty, beach areas, and I guarantee it to grow!
PERFECT FOR SLOPES

If slopes are a problem, plug in Amazoy and let it stop erosion. Or plug it into hard-to-cover spots, playworn areas, etc.

PLUG AMAZOY INTO OLD LAWN, NEW GROUND OR NURSERY AREA

Just set Amazoy plugs into holes in ground like a cork in a bottle. Plant 1 foot apart, checkerboard style. Every plug 3 sq. inches.

When planted in existing lawn areas plugs will spread to drive out old, unwanted growth, including weeds. Easy planting instructions with order.

Your Own Supply of Plug Transplants
Your established turf provides you
with Zoysia plugs for other areas as
you may desire.

NO SOD, NO SEED

There's no seed that produces winter-hardy Meyer Z-52 Zoysia. Grass and sod or ordinary grass carries with it the same problems as seed—like weeds, diseases, frequent mowing, burning out, etc. That's why Amazoy comes in pre-cut plugs . . . your assurance of lawn

Every Plug Guaranteed to Grow In Your Area . In Your Soil

- WON'T WINTER KILL-has survived temperatures 30° below zero! WON'T HEAT KILL—when other
- grasses burn out, Amazoy remains green and lovely!

Every plug must grow within 45 days or we replace it free. Since we're hardly in business for the fun of it, you know

In business for the fun of it, you know we have to be sure of our product. Consider the time and money you invest in your lawn and it doesn't pay to struggle with grass that burns out just when you want it most. Order Amazoy now and let it spread into thrillingly beautiful treft.

TO For Ordering Early!

Order Now For Earliest Planting In Your Area

100 Plugs plus bonus of 10. TOTAL of 110 PLUGS

nd plugger, plus bonus of 20 FREE	and plugger, plus bonus of 25 FREE	and plugger, plus bonus of 50 FREE TOTAL 350	1100 plugs and plugger, plus bonus of 200 FREE TOTAL 1300 PLUGS 399

Work Less • Worry Less • Spend Less

- Easy To Plant, Easy Perfect For Problem Areas To Care For • Chokes Out Crabgrass
- And Your Established Amazoy Lawn-Reduces Mowing 3/3
- Reduces Mowing 1/3 Stays Green Through Droughts Resists Blight, Diseases.• Won't Winter Kill And Most Insects Laughs At Water Bans

No Need To Rip Out Your Present Grass Plug In Amazoy

ON PATENTED STEP-ON PLUGGER. OR GET IT FREE WITH LARGER

ORDERS OF 600 PLUGS OR MORE. A growth-producing 2-way plugger that saves bending, time, work. Cuts away competing growth at same time it digs holes for plugs. Invaluable for transplanting. Rugged yet so light a woman can

Just set Amazoy plugs into holes in ground like a cork in a bottle. (Plant 1 foot apart, checkerboard style.) Easy planting instructions with each order.

Order now for Bonus Plugs Free, and earliest delivery at planting time in your area.

Dear Mr. Senkiw: Please send me	n Rd., Baltimare, Maryland 21215 the quantity of guaranteed Amazoy ned same day taken from soil, ship-
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plus bonus of 25 FREE, lolus bonu	AL \$1775 TOTAL 1300 \$2095
I Enclose \$	CheckM.O.
NAME	
ADDRESS	
CITY	
STATE	zip



Isn't there <u>anything</u> that will <u>really</u> help me quit smoking?

Clinical tests have shown that an alkaloid called Lobeline Sulfate is an effective smoking deterrent. Lobeline works not by making smoking unpleasant, but by acting as a substitute for the nicotine in your system without being habit forming. It helps to remove the craving and to reduce withdrawal symptoms

Do I need a prescription to get Lobeline Sulfate?

Not so fast. Lobeline Sulfate is highly efficient but it has a big drawback. Taken in sufficient quantities to be an effective substitute for nicotine, Lobeline often upsets the stomach. This is one of the reasons doctors seldom prescribe it.

Doesn't that leave me where I started?

No indeed. A number of years ago scientists at a great American University determined to tackle the problem. They discovered that buffering Lobeline Sulfate with two special antacids virtually eliminated any likelihood of stomach upset. Also these buffers greatly increased the efficiency of the Lobeline.

Where can I get this buffered Lobeline Sulfate?

This new discovery was a great breakthrough in the smoking deterrent field. It was immediately patented* and is now available under the name of Bantron. No other smoking deterrent has such a patent. Bantron is a little white tablet, pleasant and easy to take. Many doctors recommend it to their patients and you can get it at any drug store without a prescription.

What about all those lozenges and chewing gums advertised as deterrents?

If they contain Lobeline Sulfate at all, they cannot give you the efficiency of Bantron. Bantron is the only major smoking deterrent based on buffered Lobeline Sulfate. Because of this Bantron can safely give you four times as much Lobeline in a single dose as any other deterrent in the drug store.

How do I know Bantron will work for ME?

Before Bantron was put on the market it was thoroughly researched. It was tested on hundreds of people who wanted to quit smoking. In these clinical tests 83%, more than 4 out of 5, quit easily and pleasantly with the help of Bantron in only 5 to 7 days. Figure for yourself the odds in your favor. Looks like Bantron could be a good bet.

*U.S. Pat. No. 2705695

ON THE WAY: A COMPLETELY DIFFERENT AUTO ENGINE

-(Continued from page 23)-

Wankel's advantages over the piston should be clear. Take parts, for example. Even when the Wankel requires the same parts a piston engine uses, it uses fewer of them. Spark plugs are a good example. Wankels need only one or two—conventional engines six or eight. So, when you dig into your wallet to replace points and plugs, you won't have to reach so deep.

With a Wankel engine, you'll never have to worry about a valve job. There are no valves. You'll never throw a connecting rod, no matter how wildly you drive. There aren't any. You'll never have to have the pistons ground, even when your Wankel reaches the last stages of senility. There aren't any pistons. Tune-ups will be simpler since your mechanic won't have to time your engine's six or eight pistons—that is, make sure they're firing on precise schedule. The timing is built into the design of a Wankel.

Tappets, rocker arms, valve springs, chain-and-sprocket or timing gears are more parts a Wankel simply doesn't have.

All of this means that a Wankel-powered car should be much cheaper to maintain than a piston car—not counting its lesser weight, size and manufacturing costs.

But don't sever all diplomatic relations with your mechanic. The Wankel can go wrong like anything else and it has its own problems—of which apex seals may still help mechanics make a living. They are the Wankel equivalent of piston rings.

A PEX SEALS are what the Wankel engine uses at the tips of the triangular rotor "blades" to prevent internal leaks. They touch the inside of the chamber as the rotor turns, rubbing at speeds up to 7,000 rpm.

When an apex seal wears away, breaks or cracks, leakage occurs between "blades," engine compression falls and the Wankel starts to sputter.

Apex seals are bound to wear. If they wear out before the rest of the car, replacing them is a major job.

The seals were always one of the tough problems in making a practical stationary rotary engine, and you may count on it that the auto engineers know they'll be in trouble if they can't make the Wankel seals last through the first owner and into the second—or greatly simplify their replacement.

Right now the question is, just how many miles will the original seals last? That's one of the things Toyo Kogyo and NSU had to satisfy themselves with before they went too far into mass production, and GM is looking hard at the seals in its test Vegas.

So far, engineers have attacked the apex seal problem two ways. They've made the seals tougher and the inside of the rotor chamber more slippery. The first seals in the original Curtiss-Wright Wankels lasted only seconds. By the time NSU put the Wankel into mass production, apex seals held out 10,000 to 15,000 miles—better, but hardly good enough. NSU then switched from graphite to cast iron seals, with a cemented-on carbide coating. That increased seal life



"Better watch it, mister, he's a one man turtle." THE AMERICAN LEGION MAGAZINE

to between 20,000 and 25,000 miles. Still not good enough. Now, NSU is using a sintered titanium-carbide alloy and says the problem is solved.

Toyo Kogyo also says it has solved the apex seal problem in the Mazda. It makes the seals of graphite—but impregnated with aluminum particles. Further, it has chromed the inside of the rotor chamber, for more slip. Toyo Kogyo claims this combination lasts 50,000 to 100,000 miles, although American dealers selling the Mazda guarantee nothing past 30,000 miles.

GM, which has been pretty closed-mouthed about its Wankel work, hasn't uttered a syllable about its approach to the apex seal problem. But Dr. Cole says he understands GM experimental seals have passed the 100,000-mile mark. And the fact that GM is going ahead with production models is a sure sign they accept the seal problem as manageable.

About the only other Wankel problem worth mentioning is the odd fact that it has no natural limitations on how fast it will turn over if you feed it enough gas.

A conventional engine has a valve float to keep the engine speed from exceeding 8,000 or 10,000 rpm. But the Wankel is valveless. Unchecked, a fool or a stuck accelerator could keep revving it higher and higher until it blew its brains out. So car makers have been putting an automatic carburetor shutoff into their Wankel-engined autos. It comes on at 7,000 rpm.

One of the main reasons Detroit is turning to the Wankel is the 1976 federal auto exhaust emission standard. It practically requires auto makers to make car exhausts as pure as an angel's breath. Cleaning up conventional engines, while it may be possible, is costly and technically tricky. Much additional pollution control equipment will be needed under the hood where even a sardine packer can hardly find more space.

RACED WITH zero room under the hood, a difficult technical task, and the prospects of passing new costs on to the consumer—thereby cutting back new car sales—Detroit yearned for a non-polluting engine.

The Wankel isn't it. Fact is, it emits twice the amount of hydrocarbons as a conventional engine and a bit more carbon monoxide. In only one of the three pollutant substances—nitrogen oxide—is the Wankel superior to the piston engine.

But hydrocarbons and carbon monoxide are rather easily controlled by afterburners or chemical catalysts installed near the muffler. In fact, since the Wankel operates at slightly higher temperatures than the conventional engine, afterburners and converters actually work better.

That leaves nitrogen oxides. These substances have been Detroit's main worry, so far as the conventional engine is concerned. Afterburners and catalytic converters ignore nitrogen oxides. About the only way to get rid of them entirely—and that's just about what federal standards demand—is to seal the engine completely—no tune-ups, no repairs, no tinkering, no tampering. Only higher costs.

As it happens, the Wankel emits only 40% to 80% of the nitrogen oxide of an ordinary auto engine, depending on its exact design. This much, Detroit thinks, can be handled by conventional means.

The Wankel's pollution problems weren't always so amenable. When Curtiss-Wright first started working on the engine, it smoked like wet fircwood. So, CW turned a Wankel over to Michigan's College of Engineering to see how it could be civilized. The chief researcher on that project was Dr. Cole, the GM president's son.

Dr. Cole not only cured most of the (Continued on page 44)



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white Pine, 12 to 1 it		
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ON THE WAY: A COMPLETELY DIFFERENT AUTO ENGINE

-(Continued from page 43)-

engine's bad breath, he discovered that the anti-pollution plumbing would only reduce the Wankel's power 5% to 6%, compared with up to 20% for the conventional engine. Toyo Kogyo has come up with similar figures.

The unique design and construction of the Wankel engine give it some other advantages.

For example, the Wankel can be made with factory machinery similar to that which makes conventional engines. Detroit doesn't have to start all over, and car engineers don't have to take crash courses in a totally new field of carmaking, as a switch to steam or electric cars would require. No expensive materials or extremely high tolerances are needed in the Wankel (the two factors that knocked the turbine out of contention).

Since the Wankel can use very low octane gasoline, it can slightly slow the pace of the exhaustion of world petroleum. It takes more crude oil to make a gallon of high octane gas than a gallon of low octane gas. The engine has absolutely no use for lead additives in gas.

Wankels can run on 70 octane gasoline, kerosene or jet fuel. One German engineer even claims he'll make it go on castor oil, if you insist. The engines in 1971-model cars require at least 91 octane gas (the lowest of the "lead-frees" and "regulars") if they're to run without self-destructive knocking.

THE LIGHT weight of the Wankel will permit slenderizing other car parts—and further savings in material costs. As Dr. Cole puts it, "If you can take 200 lbs. out of the engine, you can take 75 lbs. out of the suspension and another 75 lbs. out of the frame and supports." He might have added that this weight could be allocated to, say, crashproofing.

Unlike conventional engines, Wankels seldom require oil changes. Experience with the NSU Ro 80 shows that adding a quart over 6,000 to 8,000 miles is plenty.

All in all, it's an engine that should please both drivers and manufacturers. In fact, it's already doing just that.

A number of car makers and owners have already had a lot of experience with the Wankel engine.

The first car with a mass-produced Wankel engine was the NSU Prinz, which came on the German market in the mid-1960's. It's a tiny auto, smaller than a Volks, with a 64 horsepower one rotor Wankel engine. The early Prinzes were notoriously unreliable. In the late 1960's, NSU brought out another Wankel-powered car, the Ro 80. A sleek luxury car about the size of a Volvo, it had a 125 hp two-rotor Wankel. In 1970, NSU sold about 16,000 of them

—only a few in the United States. Drivers liked their lines, found them a joy to drive.

While the Ro 80 engine was a vast improvement over the Prinz's, it didn't come close to matching the reliability of Detroit iron. According to a German auto magazine that analyzed 191 Ro 80s that had been driven an average of 20,000 miles, 65% needed new engines.

The problem, not surprisingly, was those pesky apex seals. But this was before NSU switched to sintered titanium-carbide alloy.

Mercedes Benz has yet to sell a single



"Forget your glasses?"

THE AMERICAN LEGION MAGAZINE

Wankel car. But it has built several dozen experimental cars and engines. Perhaps the most interesting is the C-111, powered by a 400 horsepower Wankel.

"The C-111 has a very thrilling response," says Jan Norbye, automotive editor of Popular Science, who's driven one. "You could compare it to a 12-cylinder high performance engine. It's definitely quicker than any V-8. When you drive it, you get the feeling that it'll keep accelerating forever."

The C-111 engine is a three-rotor job that weighs less than 400 lbs. (A conventional 400 hp engine could exceed 800 lbs.) It powers the car from a standstill to 60 mph in five seconds, and to a top speed of 190 miles per hour.

The American manufacturer with the

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most Wankel experience is Curtiss-Wright. CW has done much experimental work with Wankels in automobiles and airplanes.

For example, CW installed a 185 horsepower two-rotor Wankel in the late-model Mustang on our cover. In their tests, the car gets 15-17 miles per gallon of gas-about what Ford's 195 horsepower piston power plant for the Mustang gets in the same car body. The Wankel Mustang accelerates to 60 mph in 13.6 seconds, the conventional engine Mustang in 17.9 seconds. The Wankelpowered car has a top speed of 105.8 mph, the piston Mustang 93.3. The Wankel-engined car is also slightly better at passing. Starting from 50 feet behind a 50-foot-long truck at 50 mph, and ending up 100 feet ahead of it, in the same lane, the Wankel took ten seconds, the conventional engine 11.8 seconds.

Of course, the Wankel's lightness accounted for some of its performance superiority.

THE 185 horsepower Wankel weighed 237 lbs., while the 195 horsepower conventional Mustang engine weighed 600 lbs. The Wankel had 633 parts, 154 of which were moving, compared to 1,029 parts for the conventional engine. including 388 moving parts. The Wankel occupied five cubic feet under the hood, the piston engine 15 cubic feet.

Toyo Kogyo's R-100 Mazda, a Toyota-sized sport coupe, is powered by a 110 horsepower two-rotor Wankel. The engine weighs 269 lbs., which is hefty compared to Curtiss-Wright's, but buoyant in contrast to the 96 hp Datsun engine that weighs 421 lbs.

The R-100 Mazda was introduced to the United States in May 1971. About 660 were sold in the first three days from 30 dealerships in California and Oregon. at \$2,495 a copy, which was \$450 more than a non-Wankel Mazda, introduced at the same time, cost. After the initial surge, sales slowed to 1,500 Wankel-powered Mazdas a month.

Popular Mechanics magazine has already surveyed U.S. Mazda R-100 owners to see what they thought of their cars. This report was based on 390,000 owner-driven miles, though no single car had been driven more than 8,000 miles. Apex seal problems on cars with mileage that low are unlikely.

The owners' response to their Wankel-powered cars was overwhelmingly favorable. Some 85% said they'd buy another. Twenty-three percent were impressed by the Wankel's silence, 16% singled out its smooth power and 10% liked the low maintenance costs.

Owners said that the Wankel "sounds and feels much like a two-stroke piston engine—smooth on acceleration and stronger the higher the rpm, but rather poppety on deceleration." About 70% of the owners had no mechanical difficulties whatever with their Wankel-powered Mazdas. And, of the 30% that did have problems, only about a third had any sort of power plant trouble. That was limited to oil leaks, foul-ups in the smog-control plumbing, or carburetor difficulties. The *unique* aspects of the engine caused no trouble at all—at least not up to 8,000 miles.

The Mazda's gas mileage has been quite respectable—about 25 miles per gallon in stop-and-go driving, up to 34 mpg in mixed city and country driving.

Those interested in a Wankel-powered Mazda won't always have to pay a \$450 premium for the advanced engine. When Wankel production hits 30,000 engines a month (it's 20,000 now) Toyo Kogyo says the Wankel engine won't cost any more than a comparable piston power plant. When production hits 40,000 to 50,000 a month, it will cost less, Toyo Kogyo says. And. by 1975, Toyo Kogyo plans to be making 500,000 rotary engine Mazdas a year, mostly for sale in the U.S.

By that time, the Mazda should be getting some stiff competition from Detroit—and probably Britain, Germany. France and Italy. The Wankel is on the way. Some problems may turn up that no one knows about yet, of course. But right now, motorists can be excused a smile of eager anticipation. THE END



-(Continued from page 28)-



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renewed investigation today. Sodium nitrite, a keep-meat-red additive, is definitely harmful in unseemly but possible amounts. It is apparently innocuous for adults in approved amounts, or for children in sane amounts. But too much of almost anything, even water, can be harmful. There's a good deal of uneasiness about sodium nitrite because overdosage is too easily within reach. Unscrupulous fly-by-night meat peddlers have sometimes caused illness by putting illegal amounts of it in hot dogs, and there's concern for children who gorge themselves on "safe" hot dogs, thus temporarily overloading small bodies with sodium nitrite.

Monosodium glutamate has been voluntarily dropped from baby foods.

Another old standby, which humans have eaten for years without alarm, is under fresh study today for possible harmful effect. That's the artificial sweetener saccharin, which hasn't been found guilty of anything but is being given a close second look.

Anyone who looks the field over has to be impressed by the fact that additives in general are a boon to us all, and the real problem they give us is to weed out the few that can boomerang before they do.

The Food and Drug Administration (FDA) is the government agency that makes sure food processors use only safe chemical additives, and in safe amounts. It consists of hundreds of scientists and administrators. (Additives put into meat and meat products are supervised by the Department of Agriculture.)

N THE United States, the first laws designed to protect the public against harmful food additives were passed by Congress in 1890. They dealt mostly with imported foods. Then a variety of state regulations were passed—to the confusion of all. Food manufacturers turned cart wheels trying to comply with every state's labeling provisions and other requirements.

Finally, in 1906, Congress passed the first Federal Food and Drug Act. It made illegal the adulteration of food and drugs shipped across state lines. The law defined adulteration of a food as adding poisonous or deleterious substances, taking out valuable constituents, concealing inferiority, substituting other articles or mixing in substances which could affect quality or strength.

This law was an inadequate beginning. It didn't provide, for example, for the prior approval of additives. The government couldn't do a thing until people got sick. Still, before the act was passed, boric acid, formaldehyde and salicylic acid—all recognized harmful substances

—were often used in foods as preservatives.

Finally, in 1938, after more than 100 people died from taking an untested drug, a new law enabled the FDA to ban more harmful substances-monochloroacetic acid, a soft-drink preservative; nitrogen trichloride, a flour bleach that produced nervous disorders in dogs; and coumarin, a flavoring extracted from the tonka bean that caused liver damage in rats and dogs.

The 1938 law has been amended several times. The Miller pesticide amendment, passed in 1954, established a pro-



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cedure for setting safe amounts (usually called tolerances) for residues of pesticides allowed to remain on fresh fruits, vegetables and other raw agricultural commodities, when shipped interstate.

In 1958, the 1938 law was further strengthened by the Food Additives Amendment. This required proof of safety before a new substance could be added to food.

Among the most important provisions of the Food Additives Amendment: No new food additives may be marketed until the FDA approves them as safe. Food manufacturers must carry out elaborate safety tests at their own expense and then submit these tests to the FDA, which will then review them and make a decision.

The most controversial part of the 1958 law, without question, is the Delany clause, a provision named for the congressman who sponsored it. It provides that no additive may be allowed in any food if it causes cancer in any degree in any living species. It was this

clause that caused the banning of cyclamates, the artificial sweetener, in 1969. This is a super-safe provision—as some animals can get cancer from substances that don't give it to humans.

The basic law was amended again in 1960, with the Color Additive Amendments. These established safe dosage limits for coal tar dyes known to be harmful to animals in massive doses. This amendment also carried an anticancer clause essentially identical to the provisions of the 1958 Food Additives Amendment.

When all of these laws and amendments are put together, they amount to some pretty formidable protection for consumers. Because of them, food contents must be truthfully identified, the safety of additives and artificial colors must be proved before they can be used in foods, and no known cancer-causing substance can be put into foods, even in the smallest amounts. In addition, food processors must show that a proposed additive will be of definite benefit to the consumer, producing a higher quality product than would otherwise be possible. Similar laws apply to meat and poultry.

THESE LAWS, of course, apply only to foods shipped in interstate commerce, though most states have similar laws. But no one is yet completely happy with them. The manufacturers think they're much too rigid, that they prevent the use of many additives that could be of positive value to consumers.

As C. W. Cook, head of General Foods, says of the Food Additive Law, "We think that first, it is impractical and, second, it is not broad enough. For example, in my judgment, the ban on potentially harmful items should not be confined to those that may cause cancer. It should include a number of other things that might damage health. On the other hand, it should provide for use -within safe limits—of additives that could be harmful if used in excessive quantities.

Meanwhile, a number of consumer groups think the laws are filled with loopholes. The main one they cite is the fact that the law takes for granted the safety of substances long used in foodseven though it demands careful safety checks for all new substances.

Even the FDA itself isn't really comfortable with the law it administers. These laws, it feels, put the FDA between consumers and manufacturers, like a friend trying to mediate between two jealous, suspicious lovers. The FDA must deal with the political and financial power of the manufacturers-which is enormous—and the political power of the public, which is also strong, if fragmented. If the food folks think FDA

is too rigid, militant consumer groups think it's too lax and not big enough for its job, while the FDA thinks it's between the devil and the deep blue sea.

The FDA isn't the only group guarding the safety of our food. There is the Food and Nutrition Board of the National Research Council (a private, nonprofit organization of scientists established by Congressional Charter). This board includes the Food Protection Committee, which has developed basic principles and evaluation procedures to assure the safety of the national food supply and has published the Food Chemicals Codex, which defines foodgrade chemicals, lists their physical properties, methods of storage and packaging and functional use in foods.

Another organization which keeps a watchful eye on our food is the Nutrition Foundation, sponsored by the food industry. It awards research grants and publishes information for the further understanding of nutrition in general.

Then, there are two bodies of the United Nations also dedicated to assuring a safe and good food supply, which freely exchange information with the FDA.

The major barrier to the addition of unsafe chemicals to our foods is the testing and approval procedure required by law for each new substance and adhered to by the FDA and the law-abiding food manufacturers.

These tests are conducted by the food manufacturers at a cost of \$100,000 to \$3 million, and sometimes take several years. Essentially, they amount to subjecting many experimental animalsrats, guinea pigs, rabbits, mice, dogs, pigs or monkeys-to each potential addi-

(Continued on page 48)

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to switch to a pipe. That was over 30 years ago.

Like most other cigarette smokers I just couldn't tolerate the goo, the bitterness, the tongue bite, and that stale, foul, after-taste that results from smoking an ordinary pipe. As a result I dedicated hundreds of hours searching for the ideal pipe—buying all the disappointing gadgets, and never finding a single, solitary pipe that would smoke hour after hour, day after day, without bitterness, bite or sludge. In disgust I gave up and went back to cigarettes—and of course back to COUGHING, WHEEZING, CHOKING.

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sludge.

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WHY CHEMICALS IN OUR FOOD?

-(Continued from page 47)-

tive, under a variety of conditions, and seeing what happens.

These animals get all sorts of testsshort- and long-term massive doses and diets. The effect on them is minutely studied in life and after they've died. Some of the test animals are specially bred to overreact to various diet changes. Such tests are run for two years or more.

Throughout the safety evaluation, the food manufacturers' scientists attempt to determine the "maximum no-effect dose." This is the largest daily intakeover an entire lifetime—that human beings can handle without experiencing any ill effects.

After the manufacturer is satisfied with the safety of his new additive, he submits all the evidence to the FDA, with the request that a regulation be published providing for the safe use of the chemical in foods. The FDA evaluates more than 250 such petitions a year. In some cases, it does tests of its own, or has them done by independent scientists. If the FDA is finally satisfied with the safety—and usefulness—of a proposed additive, it publishes a regulation in the Federal Register. This regulation details the conditions under which the compound may be safely used, including in which foods, in what amounts and with what labeling provision.

If no scientist reading the Federal Register reports any information indicating the compound is unsafe and needs further testing, we start eating it.

The system is not foolproof because no system is foolproof. But on the record it is pretty effective. However, it isn't all-inclusive.

OT ALL OF the nearly 3,000 additives now used in American-made foods have been tested and retested as described above. The law the FDA administers says that all new compounds must be thoroughly tested. If these pass muster, they become "regulated substances," with their uses and doses prescribed by law. Perhaps half of our additives were already in use when the new law was passed. Continued use without further testing is permitted if they are "generally recognized as safc" by qualified experts. That is, if on inquiry by FDA no one has any objections to a substance already in use in 1958, when the Food Additives Amendment was passed, it is put on the GRAS (generally recognized as safe) list rather than on the "regulated substances" list-and no further testing is required.

The FDA did its best to get scientific comment on those pre-1958 additives. It sent out lists of them to 900 selected scientists for comment. The first list of 189 additives brought comments from only 355 of these scientists, and only 100

or so had anything worth saying. So, the FDA changed its tactics. It now publishes the names of the candidates for GRAS additives in the Federal Register and hopes that any scientist with negative information speaks up. If, after a certain period, no comments are received, the compounds go on the GRAS list.

Currently, about 670 additives have survived screening by inquiry to arrive on the GRAS list. The only way in which they are regulated is that the FDA specifies safe daily intake limits.

Consumer groups have never been



"Well, it looks to me like you'd be willing to put up with a little self-consciousness if it gets him to eat!"

THE AMERICAN LEGION MAGAZINE

very happy with the GRAS list. They contend that because of it, Americans are eating all sorts of undertested chemicals. Since people have safely been eating many of the GRAS chemicals for a long time, these objections didn't have much effect until scientists began finding some ringers on the list.

In 1969, Dr. John Olney, of Washington University in St. Louis, found that the flavor enhancer, monosodium glutamate (MSG), a GRAS-list substance, could cause brain damage in infant mice. At the time, MSG was widely used in baby foods. As a result of Dr. Olney's discovery, baby food makers voluntarily dropped MSG from their products.

Now it is under attack for adult use, too. The Chinese used it for centuries in soy sauce and it is held responsible for the headaches of "Chinese Restaurant Syndrome" that some people suffer.

Later that year, after tests showed that cyclamate sweetening, another GRASlist compound, caused bladder cancer in rats, the then chairman of Health, Education and Welfare, Robert Finch, banned the chemical from further use in foods, except for some very specialized applications.

As a result of these and other discoveries, President Nixon asked the FDA to review all GRAS-list substances

for safety. Some 23 additives, including MSG and saccharin, have been singled out for special investigation, and 350 other substances will also be thoroughly tested.

"The GRAS list review should be finished by Spring, 1972," according to Charles C. Edwards, an FDA commissioner. "At that time, one of three things could happen to a GRAS substance: reaffirmation of its present status, conversion to a regulated additive, or conditional use for a limited time while necessary experimental work is done to answer safety doubts that have been raised. Obviously, there is a fourth alternative-to have the substance banned. But nothing at this point leads us to believe there will be such drastic action.'

Today, sweeteners continue to give the diet-drink industry headaches. Cyclamates had been the mainstay of the \$1 billion a year soft drink industry. For the bottlers, cyclamates had been a bonanza. About 64¢ worth of the substance had the sweetening power of \$6 worth of sugar. And for consumers eager to cut down the calories, cyclamates had been an almost perfect substitute, since the stuff had none of the bitter aftertaste of saccharin. But out they went under the Delany clause when two University of Wisconsin researchers found that cyclamates caused bladder tumors in laboratory rats.

Now saccharin, the only important sugar substitute left to the diet drink industry, is under a cloud. According to one study, rats fed a diet comprising 5% saccharin developed more than the usual number of cases of stomach cancer. Other studies seem to show saccharin does not have this effect. As a result of these studies, however, saccharin is being removed from the GRAS list. Preliminary regulations will still permit its use in diet drinks and foods until investigation cuts through the present fog, however. For saccharin has long been consumed by man without reported harm and the present doubts are as yet only suspicions.

OT ALL ingredients in food are listed on labels—by a let on labels—by a long shot. If they were, a loaf of bread might have a list 93 names long. The FDA allows some foods to be classed as "standard." It approves a basic recipe and then—as long as nothing more is added-it allows packaging without listing the contents. Most "standards" would fit the average man's notion of being staple foods.

If a food processor decides to turn out a product similar to a "standard" that doesn't use the traditional recipe filed with the FDA, but wants to call his product by the standard name, he must label it "imitation." In imitation sour cream, vegetable fat is substituted for butter fat. Imitation jelly contains less sugar than regular jelly, which means it has fewer calories and isn't as sweet.

If there's a mixture of natural and artificial flavors in, say, vanilla ice cream, and the natural predominates, it must be called "Vanilla-flavored" ice cream. But if the artificial flavors predominate, it must be labeled "artificially flavored" vanilla ice cream. Other regulations cover the phrases "meat sauce," and "meat-flavored sauce," or "cheese food," etc. They specify how much of an ingredient must be used so that the product can be labeled with any particular phrase, or which additives can be used and how much of them.

THERE'S NO denying that every addi-L tive purposely put into our foods serves one useful purpose or another. And it is clear, at least for additives that have become common since the GRAS list was established, that each has been tested and retested with great carewhile the GRAS list soon will be.

Recently, General Foods voluntarily went before the Committee on Food Additives of the United Nations to request a review of its research findings and its approval of TCE as a food additive. TCE is an agent used in decaffeination of coffee which leaves a minute residue behind. The residue has long been regarded as safe in the United States, but some European countries consider it potentially hazardous, and General Foods is seeking to establish the facts underlying a divided opinion.

In total, the food additive situation is far too complex for any simple, off-thecuff clichés about it. It needs constant policing, and perhaps a bigger and better enforcement agency with enlarged research capabilities, too.

The dangers are often overrated. Across a spectrum of 3,000 or so additives, the questionable ones are a handful. Now that we've moved off the farm as a nation, additives in general make it possible for us to eat. Most are safe, necessary and largely responsible for the fact that our food supply is tasty, varied, nutritious and plentiful. No overall view could come to any other conclusion. Given our present urbanized society, we would not be the best fed nation in the world without by far the bulk of the additives. We may still have some hunger in the United States, but malnutrition is a rarity and additives have had a lot to do with it. Our present population, situated as it is, could hardly do without most additives, which is the answer to the question I was assigned at the start.

THE END



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-(Continued from page 15)-





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WHEN ANSWERING ADS—

on the port side, generally placing men in boats only when they were about to be lowered with vacant seats. Colonel Gracie worked at loading and launching the boats, with no thought whatsoever of himself, just as if he'd been a member of the ship's crew.

In some cases the steerage passengers were ordered not to come beyond the barriers that marked off their quarters. Most ignored that order and began working their way up through the great ship, many by means of the emergency ladders intended for the crew's use, and some getting hopelessly lost. A long line of them crawled up a crane in the after well deck, inched along the boom to the first-class area, and climbed over the railing and up to the boatdeck. The steerage passengers did not calmly joke and talk and wait, as did most of the others on the ship. They knew the score from the beginning, whereas a surprising number of those in upper-class passage refused to accept the fact that the ship was actually sinking. Even most of the ship's crew considered the launching of the lifeboats nothing more than a safety measure. One junior officer, finding passengers breaking down a jammed door to release men behind it, threatened to have the group arrested for damaging Titanic property when the ship reached New York. It was probably shipbuilder Thomas Andrews who first convinced the upper-class passengers that the situation was desperate. After pleading with women to get in the lifeboats, and after seeing them get in and jump out just to go get a forgotten photograph or the like, he dropped the "attitude of precaution" and yelled, "Get in! Get in! You haven't a moment to lose if you wish to save your lives!" It worked-but by then most of the larger lifeboats had been launched. There was much difficulty in launching the collapsibles, and the last one came off the ship, upside down, only as the vessel sank.

Second-class passenger Lawrence Beesley was told to jump for a boat being lowered that was not quite full. He did so and lived to write an account of the disaster that included a plea for reforms in ship safety.

After the crash, White Star Manager Bruce Ismay ran about the boat in his carpet slippers, consulting with the captain and the engineers. He began shouting orders about the lifeboats until Fifth Officer Harold Godfrey Lowe told him to shut up. Ismay and one other man joined about 40 women in the first collapsible launched.

John Jacob Astor kissed his young wife and helped her into one of the boats. He asked if he might join her. Lightoller told him he might not, and he retired without complaint, asking only

the number of the boat so that possibly he might locate her later. The subsequent report that he tried to force his way into a boat was completely false, as witnessed by Colonel Gracie, who helped Astor lift his wife over the fourfoot rail of the ship into the arms of Officer Lightoller, who had one foot planted in the lifeboat and the other on the deck rail.

Mrs. Isidor Straus flatly, firmly, calmly refused to leave her husband. The elderly couple walked off together along



"There's your dinner—and don't tell me you had that for lunch!"

the listing deck, their arms around each other's waists.

Mrs. Hudson Allison of Montreal also refused to leave her husband, even though their small daughter Lorraine would not get into a boat without her. All three were lost. The small Allison boy, his nurse and Mrs. Allison's maid were saved.

Benjamin Guggenheim and his male secretary went to their cabins and changed from the sweaters the steward had insisted they put on into evening clothes. Back on deck, Guggenheim explained, "We've dressed in our best and are prepared to go down like gentlemen." That they did.

George Widener saw his wife into a lifeboat and then just quietly waited with his son Harry for a turn at rescue which never came.

Arthur Ryerson noticed that his wife's French maid had no life belt and buckled his on her before his wife, their three children, a governess and the maid were assisted into a boat.

John B. Thayer had with him on board, in addition to his wife, his 17year-old son Jack. After Mrs. Thayer was put into a boat, Thayer and his son got separated. The older man told a fellow passenger he was satisfied to go down with the ship because he'd seen his wife safely off and he'd been told his son was in a lifeboat, too. Young Thayer was not in a boat. He saved his life by coolly jumping just at the right time as the ship went down, and by his strength as a swimmer.

Collapsible Boat D was the third collapsible to be launched and the last lifeboat to leave the ship upright and holding passengers. While it was loading, Lightoller had crew members circle it with arms locked. It had only 47 seats, there were still some 1,600 people on the ship, and the officer was still doing his best to fill boats with women and children. Only after Boat D was sliding down the side of the ship did two men find a chance to jump for it from a lower deek. They fell half in and half out of it and were saved.

Just before this boat was launched, a man who was traveling as "Mr. Hoffman" handed two little boys, the older one just four, through the ring of seamen without making any effort to push through himself. As the children were placed with women in the boat, the man said that he, their father, was taking them to visit relatives in America. It was some time after the children reached

New York before it was learned that the man's name had been Navatril and that he had kidnaped the pair from his estranged wife in Nice. The boys were finally reunited with their mother.

Mrs. Frederick Hoyt, the last woman to leave the ship's deck of her own will, was helped into the boat by her husband, a noted naval architect who'd been assisting ship's officers with the loading. As the boat settled in the water, Hoyt took off his overcoat, climbed over the ship's rail, and dropped feet-first into the sea. He came up near the boat and his wife hauled him into it. He spent a miserably cold night, but he didn't freeze, thanks to the exertion of rowing and to the brandy flask his wife had thoughtfully brought along.

THE WOMEN in the lifeboats had quite varied dress. One wore a huge Turkish towel around her waist, a fur evening cape over her shoulders, and rubber boots. One had on a frilly nightgown and kimono and white satin slippers. Many were wrapped in magnificent fur coats and wore fashionable, lace-trimmed hats, while others had plain woolen shawls pulled about them. They carried with them items that ranged from satchels of jewels to bags of oranges, and included a musical toy pig and a wedding veil.

By about 2:10, the 19 lifeboats had

been lowered and the seamen manning them were trying to get them a safe distance from the ship. The *Titanic* was very low in the water, with her foreeastle deck completely submerged and the water rising fast. But her lights still blazed, because the 35 engineers who labored deep in the ship were sticking to their posts. None of them survived.

The band, which had played cheery, ragtime tunes all during the loading of the boats, continued lustily with the same. The musicians stood by the forward entrance to the grand staircase, their overeoats topped by life jackets which would be of no protection against the cold of the Atlantic's waters. A few minutes later, Bandmaster Hartley tapped his violin and the band switched to the sweet strains of the Episcopal hymn "Autumn," which is what it was playing until the end-and not "Nearer My God to Thee." as the newspapers reported. None of the eight band members survived.

One group of passengers stood quietly on deck with heads bowed, led in prayer by Rev. Thomas R. Byles, a second-class passenger. The Reverend Byles was not seen afterward.

In the wireless shack, Operator Phillips had implored the *Carpathia* at 1:45, "Come as quickly as possible; engine

(Continued on page 52)

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WHEN THE TITANIC WENT DOWN

-(Continued from page 51)-

room filling up to the boilers." At 2:10, he was still trying to keep the set going, even though, five minutes earlier, Captain Smith had told the wireless operators, as he went on to tell the rest of the men under him, "You've done your duty, boys. I release you. Now, everyone for himself." As Operator Bride came from the compartment where he and Phillips slept, he saw a big stoker bending over the absorbed Phillips, gently stealing the busy man's life jacket. Bride yelled and leaped, and he and Phillips together knocked the stoker unconscious. They left him lying there and hurried outside to see the sea washing over the bridge. Phillips ran aft and that was the last time he was seen alive. His dead body was seen, said one survivor, on a raft in the sea. Bride saw the men trying to get the last collapsible off the top of the officers' quarters and began helping them. When the ship plunged, the small boat, with Bride and several others clinging to it, was flung out to sea. When it settled in the water, upside down, Bride was under it. Struggling for his life, he managed to get out from under, and finally onto it.

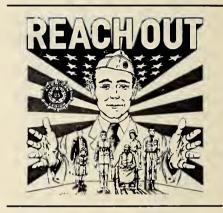
T 2:10, a steward found Thomas An-A drews standing all alone in the smoking room of the great ship he'd built. His arms were folded across his chest, his face wore a stunned stare, and his body was rigid. The steward said, "Please, Mr. Andrews, won't you have a try for it?" The ship's builder gave no indication that he heard. He was not seen again.

There are conflicting stories about how the end came for Captain Smith and First Officer Murdoch. A report, picked up by newspapers, that they had committed suicide by shooting themselves was given some credence for a time, but the most reliable evidence indicates they simply were lost when the ship went down.

At 2:20, the *Titanic's* lights blinked off, then on again, and then off forever. The great liner attained a vertically upright position, her stern pointed skyward, remained motionless for two or three minutes, and then dived beneath the sea. Many of those on her jumped before she went under, but the majority clambered

up the sloping deck toward the stern and massed there helplessly until they were tumbled or washed away.

Second Officer Lightoller and Colonel Gracie were not far apart as the ship went down. Lightoller, standing on the roof of the officers' quarters in front of the first funnel, went under with the ship. As he said later, he didn't leave it; it left him. He was at first held by suction, "as if glued" to the wire grating on the big air shaft ventilator low on the forward funnel, with the water getting deeper and deeper over him. He'd quit struggling to get loose and was within a moment of drowning when a blast of hot air came up the shaft and blew him to the surface. Seconds later, the huge funnel fell



amongst the mass of struggling humans in the water, missing Lightoller by inches.

Colonel Gracie held on to the iron railing of the officers' quarters as the ship sank. Others who did so apparently were knocked unconscious at the time or later drowned, as they were all lost. But Gracie even retained his sense of direction as the suction pulled him under. Finally, he was able to start swimming under water away from the ship and toward the surface. He prayed as he swam, and thought of his wife and daughter. Just as he feared he'd have to give in for lack of breath, he noticed the increase of light, knew he was nearing the surface, and managed to make it without swallowing a drop of sea water. He later attributed his ability to swim far and fast under water to the buoyancy offered by air rising from the sinking ship—and to the fact that his wife, visiting in New York, had had a premonition that her Archie was in danger and was actually praying for him as he made his desperate swim.

After Jack Thayer and Milton Long, a young man from Springfield, Mass., traveling alone, were separated from Jack's father, they debated what to do. As the crowds swarmed toward the stern, Jack reasoned that it would be better to stay clear of other people, to jump from the starboard rail and swim for it before being thrown into the water. He told



Long to jump first and to leap as far from the ship as possible. But Long just slid down the ten feet or so to the water, facing the ship. Seconds later, Thayer made a mighty jump from the sinking vessel that carried him safely from it. Long was lost.

Lightoller, Gracie and Thayer all swam to the overturned collapsible lifeboat and joined Bride and others in precarious positions atop its wave-washed hulk. Only Lightoller's constant instructions to the 30 men on the rolling, nearly submerged craft kept it balanced and afloat until dawn, when they transferred to safer lifeboats.

As the Titanic sank, those in the lifeboats kept their eyes on her. Lawrence Beesley described it later as ". . . the most extraordinary sight I shall ever be called upon to witness. . . The night was one of the most beautiful I have ever seen: the sky without a single cloud to mar the perfect brilliance of the stars. . . The mere bulk alone of the ship viewed from the sea below was an awe-inspiring sight. . . As we gazed awe-struck, she tilted slowly up, revolving apparently about a center of gravity just astern of amidships, until she attained a vertically upright position; and there she remained ... motionless!"

The thunderous noise that came from the ship during the moments she stood upright-"partly a roar, partly a groan, partly a rattle, and partly a smash"-was thought by many to be explosions. Later it was determined to be the uproar of the 29 boilers tearing from their beds and thundering through the ship. Along with the boilers went tons of furniture, five grand pianos, cabinets of china, dozens of potted palms, passengers' luggagethe Ryersons alone traveled with 16 trunks-and great quantities of ship's

N THE grand mixture of items that went down with the Titanic were fine oil paintings, a jeweled copy of the Rubáiyát, a fine silver duck press, 30 cases of tennis rackets and golf clubs for Spalding, a case of gloves for Marshall Field, a cask of china for Tiffany's, a new English automobile, 800 cases of shelled walnuts, 15,000 bottles of ale and stout, 30,000 fresh eggs and Eleanor Widener's trousseau.

Lawrence Beesley wrote, "... the cries of the drowning floating across the quiet sea filled us with stupefaction. . . The cries, which were loud and numerous at first, died away gradually one by one, but the night was clear, frosty and still. and the sounds must have carried for miles. . . I think the last of them must have been heard nearly forty minutes after the Titanic sank. Lifebelts would keep the survivors afloat for hours: but the cold water was what stopped the cries."

About 4:00 a.m., the Carpathia

spotted one of the lifeboats, but at the same time the ship was forced to slow to a crawl by an iceberg dead ahead, around which she had to maneuver. It was 8:30 a.m. when the last boatload from the Titanic was taken aboard the rescue ship.

There were some surprises as the lifeboats were unloaded. Four Chinamen came from under the feet of the passengers in one boat. No one knew how they got there-or, indeed, how they'd gotten on the *Titanic* for the trip to New York, as United States immigration laws forbade their entry. Mr. Henry Sleeper Harper, of the publishing family, and his wife emerged from one lifeboat immaculately dressed and as calmly detached as if they'd just come from a society benefit. Mr. Harper had with him Hamad Hassah, an Egyptian dragoman he'd picked up in Cairo, and Sun Yat-sen, his prize Pekingese. Bruce Ismay requested seclusion, was given the Carpathia doctor's cabin, and stayed there, under opiates, throughout the trip to New York. Less than a year later, Ismay retired from his position with the White Star Line, bought an estate in Ireland, and lived the life of a recluse until his death in 1937.

The Carpathia's captain, crew and passengers did everything possible to aid and comfort the Titanic survivors. Captain Rostron hauled aboard most of the

Titanic's lifeboats, cruised around the site of the sinking to be sure he was leaving no one who was alive, held a short service in respect for the lost, and headed for New York. By this time the Californian was standing by, and Rostron arranged for her to make a second search of the scene. Later that day, eight of the Titanic's crew were buried at sea from the Carpathia. Four had been dead when the lifeboats reached the rescue ship and four died shortly thereafter. The Carpathia reached New York on Thursday, April 18, at 8:30 p.m., with 705 Titanic survivors. That was all and it was 465 short of the rated capacity of her lifeboats.

The first distress call sent out by the Titanic was picked up by a 21-year-old wireless operator in New York named David Sarnoff, who was manager of an experimental wireless station on the roof of Wanamaker's department store. Sarnoff notified the authorities and the press, and then he sat for 72 hours taking messages from the Carpathia and relayed from other ships. It was very difficult to interpret the weak signals accurately and President William H. Taft ordered all wireless stations on the eastern seaboard to shut down so as not to interfere with Sarnoff's efforts to get the names of Titanic survivors. The young operator's (Continued on page 54)

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success at that task-he got the last names of nearly 700—was his first step to the fame and fortune he was to enjoy as he rose to the chairmanship of the RCA Corporation, and until his death December 12, 1971.

Such a crowd waited at the Cunard Line pier for the Carpathia to arrive that police lines had to be established for many blocks. The Red Cross and Salvation Army established bases, and ambulances from every hospital in New York were on hand. The first Titanic survivor to come down the Carpathia's gangplank



"I'm not at all interested in Women's Lib. I'm still trying to get my feminine wiles!"

THE AMERICAN LEGION MAGAZINE

was a woman wrapped in a sailor's oilskin coat. A man reached out to her and she collapsed in his arms. With the help of a Red Cross nurse, he carried her away. The other survivors followed, many who had remained calm and collected during the time of peril now giving way to their emotions. Very few had anything more than a confused idea of what had happened to the *Titanic*.

OME NEWSPAPERS, hard pressed to get details of the disaster, made up their own versions: "... In a wild, ungovernable mob, the passengers poured out of the saloons to witness one of the most appalling scenes possible to conceive. . . For a hundred feet the bow was a shapeless mass of bent, broken and splintered steel and iron." But the majority of papers, as the days passed, printed only legitimate interviews with survivors and such factual human-interest stories as reporters could uncover. There were

many of the latter. One survivor had a note, written on a blank page torn from a diary, which had been given to her by a man who had helped her and many other women into a lifeboat. It read, "If saved, inform my sister Mrs. F. J. Adams of Findlay, Ohio. Lost. J.H. Rogers." It was revealed that the lost man traveling as Rogers was Jay Yates, gambler, confidence man and fugitive from justice. Particularly dramatic copy was made of the fact that Sir Cosmo Duff Gordon. his wife and Lady Duff Gordon's secretary, as three of 12 passengers in a lifeboat made for 40, had had a near-monopoly of Boat No. 1, Duff Gordon had vetoed a suggestion that the boat go back and try to rescue some who were struggling in the water, and he'd given each member of the boat's crew "a fiver." It was left to the readers to pass judgment on the titled gent. Newspaper accounts listed the Titanic death toll at figures varying from 1,500 to 1,635, and records available today still do so.

THE AMERICAN and British inquiries into the disaster reached agreement on few points and left most questions unanswered, largely because so few men with useful and reliable information survived. But on the matter of the Californian's gross dereliction of duty in failing to aid the stricken ship, the inquiries came to accord. Said the British report, "The night was clear and the sea was smooth. The ice by which the Californian was surrounded was loose ice..." The ship could easily have pushed through to open water without risk and saved most, if not all, on the Titanic. Although this opinion resulted from testimony by members of the Californian's crew, there were later, on behalf of the Californian's Capt. Stanley Lord, private investigations that revealed some convincing argument that the ship which was so near the sinking Titanic was not the Californian but some "mystery ship."

The sinking of the *Titanic* brought about many reforms to ensure safe navigation. The winter sea lane was shifted farther south, all ice messages were recognized as serious, and an International Icc Patrol to locate drifting bergs was established. All liners began putting to sea with enough lifeboats to accommodate everyone aboard and everyone was assigned a specific lifeboat scat. All ships established full-time wireless operation and all lookouts were provided with binoculars. And the myth of the "unsinkable ship" was exploded forever.

But possibly the *Titanic* is best remembered for the number of doomed people aboard who met their fate bravely. Though many were vain and pampercd in life, they left behind a legacy of how to die nobly. THE END

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PARTING SHOTS



"Fred, I wish you'd wash the car. It's getting embarrassing!"
THE AMERICAN LEGION MAGAZINE

AS TIME GOES BY

The neighborhood gossip approached Mrs. Brown just bursting with excitement.

"You'll never guess whom I saw at the beach yesterday," she began. "Well, whom did you see?" queried Mrs. Brown, knowing that this was what she was expected to say.

what she was expected to say.

"Your 17-year-old son, Jack," declared the gossipy woman triumphantly,
"and he was cavorting with a blonde in a bikini!"

"Huh!" retorted Mrs. Brown. "What did you expect at his age a pail and shovel?"

F. G. KERNAN

UNFAIR ADVERTISING

The little church in the suburbs suddenly stopped buying from its regular office supply dealer, so the latter telephoned the deacon to ask why.

"I'll tell you why," replied the deacon with some indignation. "We ordered some pencils from you to be used in the pews for visitors to register . . ."

"Well," interrupted the dealer, "didn't you receive them yet?"
"Oh, we received some pencils, all right," replied the irate deacon.

"But you sent us some golf pencils, each stamped with the words: 'Play Golf Next Sunday.'"

UNEASY RIDER

The hippie cyclist had ventured high into the hills, finally running out of road. A hillbilly type, seeing his first motorbike, let fly at it with his rifle. "Did you hit that strange-looking varmint?" asked his pal.

"Think I just creased it," he said. "I can still hear it a'growling away up there, but I shore made him turn a'loose that poor woman he was carrying off,"

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HENRY E. LEABO

ROBIN TALK

"Why did we come north so soon?"
Said the robin to his mate.
"The air is chill, the wind is bleak;
I'm shivering right up to my beak."
"I warned you," chirped his little wife.
"But would you listen? No, not you!
Itineraries had you throbbin,
You just had to be the first robin."

BERTHA WILCOX SMITH

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With wigs for men
To buy or borrow,
What's gone today
May be hair tomorrow.

E. B. DE VITO

FIRST SIGN

Spring: When big league baseball players put on their contract lenses.

DAN BENNETT

SKEPTIC SUGGESTION

With hands spread wide, he indicates the size

Of tackle-testing trout that got away ...
But though we're rather sure our
comrade lies.

With tongue-in-cheek restraint we merely say

That "brain food" (fish) gives certain indication

It nourishes a man's imagination...
HAROLD WILLARD GLEASON

WHICH SENSE?

Intuition is what enables a woman to misunderstand things without thinking about them.

FRANKLIN P. JONES



"His four years in college have certainly upset our budget! I was counting on him getting kicked out during his first semester!"

THE AMERICAN LEGION MAGAZINE



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